

Book Reviews

WILHELM WEBER and EDUARD WEBER, *Mechanics of the human walking apparatus*, transl. P. Maquet and R. Furlong, Berlin and New York, Springer-Verlag, 1992, pp. xix, 273, illus., DM 168.00 (3–540–53541–1).

This is the latest in a series of classic works on animal and human locomotion translated for Springer-Verlag, including Giovanni Borelli *On the movement of animals* first published in 1680, and Wilhelm Braune and Otto Fischer on the *The human gait* published in 1895. This translation is made from an 1894 edition, although the original appeared in 1836, thus falling between Borelli's innovative treatise on the bio-mechanics of walking analysed by eye, and Braune and Fischer's scientific investigation illuminated dramatically by photographic studies. By contrast the Webers were restricted to confirming their ingenious locomotor experiments by accurate chronometers and telescopes.

Having observed that man can walk for longer than he can remain standing, the authors noted his capacity to adapt to soft, uneven and mountainous territory, unlike the new steam locomotives, restricted to firm, flat or nearly horizontal surfaces. By analyzing human gait accurately, they established a theory of locomotion and predicted the possibility of a walking machine moved by steam on two, four or more legs to negotiate difficult terrain; a distant hope was entertained that neither deserts nor rivers would impede its progress! This diligent work divides into four sections: (i) general considerations which influence walking, running and jumping, for example the wind and inclines, (ii) anatomical analyses of the skeleton including detailed studies of the hip, knee, ankle and lower limb muscles, (iii) physiological analyses and conclusions on a theory of human gait, and (iv) a historical survey of previous work.

The investigations are astonishing in their detail; mensuration of each vertebral body and its disc; accurate weighing of 41 muscles in the leg to demonstrate how extensor muscles weigh more than twice the flexor muscles; experiments proving that negative suction within the hip joint enables the leg to hang and swing freely in the non-stance phase of gait; measurements demonstrating why the longest step in walking is less than half the possible spread of the legs and so on. The translators, both orthopaedic surgeons, are to be congratulated for enlarging the readership of the Webers' scientific contribution, which should attract bio-engineers, many surgeons and historians of both science and physiology. It is well-produced, though somewhat expensive, but sadly the title-page of 1836 is omitted and curiously two pages of modern adverts intervene between the index and the plates.

John Kirkup, Royal College of Surgeons of England

W. J. STEPHEN, *Primary health care in the Arab world*, Wells, Somerset House, 1992, pp. ix, 314, (0–7291–0200–9).

The delivery of primary health care has been a topic of intense controversy in the Arab world since the early nineteenth century. Apart from the influence of professional differences of opinion, discussions have been marked by nationalist and ideological rivalries, religious debates, and a general perception, among the literate sectors of society, of precipitous decline from the past greatness of Arab civilization's achievements in the field of medicine. That medical care and public health are specific responsibilities of government is a notion that quickly took root and spread, and today debates on this and related themes continue to exert considerable pressure on Arab regimes to improve conditions among the people they rule. Genuine and comprehensive progress has been especially prominent since the 1960s, as the case of almost any Arab country will readily attest. Mortality of children under the age of five (per 1000 live births) in Egypt, for example, has dropped from 301 in 1960 to 94 in 1989; the same country, which had no rural health units through the early 1950s, had 200 by 1962 and over 2000 by 1986.

It is almost exclusively this contemporary period, since the 1956 Suez war, that Stephen covers. His study is not written from a historical perspective, but rather assesses progress toward realization of the aims of the 1978 Declaration of Alma Ata, later taken up by the WHO and UNICEF, calling for "health for all by the year 2000". Primary health care systems in Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Libya, Qatar, Syria, the United Arab Emirates, and Yemen are all discussed in

separate chapters, and the data presented there are made the basis for further analysis of the social, political and economic context, medical education, and needs and problems which remain for future programmes to address. While conceding the record of improvement in all the countries surveyed, Stephen argues that decisive progress may realistically be expected only when attention is focused on basic health problems, as well as on such underlying factors as poverty and illiteracy. As matters currently stand, many factors combine to undermine commitment to such priorities: among these are rapid population growth and urban expansion, political considerations, the drain of military spending, spiralling health and medical costs, fascination with high-tech medicine and sophisticated high-profile hospitals, and inappropriate medical education and emigration of trained personnel.

While acknowledging the dedicated labours of innumerable skilled physicians and health workers across the Arab world, the book is especially critical of medical and health care as delivered to the patient. For example, community participation is encouraged among peasants accustomed to domination by local vested interests, immunization programmes requiring long-term constant refrigeration facilities are launched in areas without electricity, powerful prescription drugs are grossly misrepresented and often dispensed by untrained clerks, patients are often treated by expatriates with whom they cannot communicate. Repeatedly highlighted is the futility of providing a country with a costly urban-based hospital network and medical profession, when most of that nation's people are peasants living in agrarian hinterlands poorly linked to urban centres. All of these difficulties are well known, and Stephen concludes that it is not a lack of knowledge or information that obstructs real progress toward the Alma Ata goal, but rather the lack of political will to formulate a socio-economic order aiming for equality both within society and between nations (p. 290).

Though not a historical study, Stephen's work is a mine of information on all aspects of the history of medical and health care in the contemporary Arab world. Data have been collected from a wide range of published sources, and much additional information comes from his own field work between 1981 and 1988, and so is here available for the first time. A thorough index would have rendered the rich and varied contents of this book far more accessible (the 3½-page index provided is woefully inadequate), but researchers on the history of medicine in the modern Arab world will nevertheless find this work a very useful research tool.

Readers must bear in mind, however, that the author's field work, as described in his preface, was in fact very limited—no more than two or three weeks in any one country visited. This must surely be insufficient to establish the case for the criticisms he advances in his final chapters, and to some extent his discussion and source material refer to problems of the Third World generally, as opposed to the situation in specific Arab countries. In some cases it is also unclear how the available data can and should be interpreted. As Stephen concedes in his concluding summary (p. 289), statistics lend themselves to image-making and allow for the creation of favourable impressions which seem entirely credible, until first-hand observation of the situation in the field reveals them to be entirely illusory. The truth of the matter is that it is mistaken to view statistics as mere "raw" data, when at practically every level through which such information passes it is very well known that "results" may have a heavy impact on personal careers, the future of favoured programmes, and the image of the regime and nation both at home and abroad. In sum, while data may not be in short supply, there most certainly is a problem of information and knowledge where the interpretation of that data is concerned. Indeed, no small part of the value of Stephen's work lies in its framework for further discussion of precisely such issues as these.

Lawrence I. Conrad, Wellcome Institute

Tractatus simplex de cortice peruuiano: A plain treatise on the Peruvian bark ("The Stanitz Manuscript"): a late seventeenth or early eighteenth century anonymous manuscript account of the Jesuits' bark published in its original Latin text with a translation, introduction, and notes by Saul Jarcho, MD, Boston, The Francis A. Countway Library of Medicine, 1992, pp. vii, 116, illus., \$19.00 (0-88135-176-8).

With this careful edition and translation of a Latin manuscript on the Peruvian bark, now in private possession, Jarcho provides a source that is more relevant to the history of pharmacology