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cerned with all organic phenomena and thus embraced pathology. Furthermore, fever was seen by Röschlaub not as disease *per se* as hitherto but as a symptom of an anomaly in the normally balanced relationship between the organism and its external environment. But above all, Brown's theory of excitability offered an intellectual basis for therapy. Tsouyopoulos shows convincingly that the crisis of conflicting medical philosophies at the end of the eighteenth century was largely caused by a failure to relate the practice of clinical medicine to theory with the result that the eclectic school were able to pay lip-service to innumerable contradictory theories while adhering to a conservative case-based therapy in the name of the Hippocratic tradition. Following Kant's critical philosophy, however, an acute need was felt to provide medicine with a general scientific foundation that would give both satisfactory theoretical explanation and consistent guidelines for treatment. Röschlaub believed that the excitability theory provided that basis with its underlying notion of a biological continuum both in analogy with and in counter-distinction to the physical continuum of the exact sciences. This independent biological continuum afforded medicine the possibility of producing adequate theories of pathogenesis and a concept of the individual as "a totality of life processes rather than as previously a mere sum of physical properties" (p. 219). Physiology was thus the unifying and primary discipline for medicine.

Röschlaub's reputation could possibly have withstood intellectual controversy and perhaps even the dissolution in 1805 of his friendship with Schelling, whose eventual analogy of the magnetic, electrical, and chemical processes with three "dimensions" of the organism, reproduction, irritability, and sensibility, he found medically unhelpful. But behind the growing hostility between the two exponents of the early *Naturphilosophie* were the machinations of others who felt threatened by Röschlaub, his former allies Walther, Döllinger, and Marcus, while beyond them were the vested interests of practitioners whose livelihood would have been endangered by Röschlaub's demands for proper clinical treatment of illness on a social scale. If all this were not enough, Romantic medicine itself was to fall into disfavour as the positivist approach from France gained ground, to the point where Karl August Wunderlich in 1859 dismissed it as mere hollow theory divorced from all empiricism, a myth that survived for nearly a century.

As far as Röschlaub is concerned, that myth is now finally dispelled by Dr Tsouyopoulos's book. It is, however, to be recommended for more than putting the record straight. Its coverage is excellent, looking with lucidity not only at Röschlaub's work in the many areas of his interest, but also critically at the context both of contemporary medical theory and Romantic philosophy. She shows that Röschlaub and his versions of *Naturphilosophie* provided the basis on which physiology and science could be introduced into medicine. Ironically, that medicine was later to reject both Röschlaub and his views as "unscientific". But, above all, she reminds us that Röschlaub's brand of Romantic medicine, his concept of the dynamic interdependence between organism and environment, today seems far more modern and acute in judgement than the myopically somatic approach of his later belittlers.

Nigel Reeves  
University of Surrey

HORACE W. DAVENPORT, *Physiology 1850–1923. The view from Michigan*. (Supplement to *The Physiologist*, vol. 24, no. 1, February 1982, 4to, pp. vii, 96, illus., \$25.00.

The American Physiological Society has had a more than ordinary interest in the history of the field that it represents. For some thirty years, the Society has actively sought out the reminiscences of its senior members and it has regularly made space available in *The Physiologist* for historical articles. In late 1983, the society announced the formation of a section to be devoted to history. The work under review thus does not stand in isolation, although it is unusually ambitious and detailed, which presumably explains why it has appeared as a supplement rather than an article. This monograph is an excellent local institutional history; it documents with great care matters of purely local interest while making plain, where appropriate, the national and international importance of individuals and events.

Davenport treats his subject chronologically and with a heavy emphasis on biographical details about individuals important in the development of the department. He provides information about the scientific interests and publications of members of the department and he also

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draws on textbooks, lecture notes, syllabuses, and examination questions to tell us what was taught at various times. His monograph thus becomes a resource not only for the historian of physiology but also for the historian of medical education. (The serious reader should not overlook the mass of valuable detail contained in the annotations, many of which display an entertaining dry humour.) This monograph also reminds us (or informs those who never knew it) of the remarkable progress made by the mid-western state universities within decades of their founding. In 1881 (only five years after the founding of the Physiological Society and six years before the founding of the American Physiological Society), the faculty at Michigan identified Henry Sewall as Newell Martin's most promising student and brought him to the chair at Ann Arbor in 1882. This single act connected physiology in Ann Arbor with the new scientific medicine at Johns Hopkins and with the rebirth of physiology in progress at Cambridge and University College. It also brought to Michigan a man who had worked not only with Martin but also, even if only briefly, with Langley, with von Kries (in Ludwig's laboratory), and with Kühne. The choice, in 1889, of William Henry Howell as Sewall's successor was equally impressive. Davenport's book concludes with three chapters on Warren Lombard. The University of Michigan shared with the Rockefeller Institute for Medical Research the distinction (if that is what it was) of supplying many of the prototypes for the characters in *Arrowsmith*; Lombard was the prototype for Robertshaw. If anyone ever decides to make a systematic study of the lives and careers of those prototypes, Davenport's chapters on Lombard will prove very helpful. Quite apart from its own merits, Davenport's book, by appearing as a separate supplement may serve the valuable purpose of drawing attention to the many articles on the history of physiology to have appeared in *The Physiologist* in its first twenty-five years.

Paul F. Crane  
The Rockefeller University, New York

CAROLE HABER, *Beyond sixty-five. The dilemma of old age in America's past*, Cambridge University Press, 1983, 8vo, pp. ix, 181, £17.50.

This is a very brief monograph (only 130 pages of text), in many ways no more than an extended essay. The first two chapters, comprising more than a third of the book, are devoted to a survey of the position of the aged in the American colonies and the United States in the nineteenth century. The author is very concerned to disabuse us of the notion that there was once some "golden age" of senescence in which the elderly were treated with veneration, subsequent to which there developed a generalized "social distaste for the elderly" (p. 5). Instead, she suggests, the experience of the elderly varied sharply, depending on whether or not they continued to control valued social resources. Over time, however, the proportion of the aged who managed to preserve some semblance of social position and authority steadily declined. Increasingly, judgements of uselessness and superfluousness came to be categorical rather than individual and functional; so that by the beginning of the twentieth century, "age alone became clear proof of a superannuated state" (p. 125).

All this seems sensible enough, if hardly startling or original. Indeed, this portion of the text relies heavily on the existing secondary literature, with only an occasional gesture in the direction of first-hand research. Fortunately, the subsequent material, particularly the two middle chapters on medical interpretations of old age, is of considerably greater interest.

Haber argues that "developments in the theory and practice of medicine had a significant effect upon the physician's perception and treatment of the elderly" (p. 47). Prior to the nineteenth century, the major preoccupation of those physicians who *did* write on old age was with unusual examples of longevity – something they attributed to the preservation of the limited store of energy and vitality granted each of us through following "the law of moderation in every aspect of life. . . . The more wisely people used the energy they had been given, the more likely they would be to attain a healthy and long-lived senescence" (p. 55). Gradually, however, physicians in the nineteenth century began "to view the elderly as a separate class of patients requiring specific age-related treatment for their characteristic ailments" (p. 57).

The process began, she claims, with the new approaches of the Paris school of medicine, and the associated reinterpretation of pathological changes in the human organism. Increasingly,