and its several sequels. Of necessity his facts are thin and his causal lines tenuous. Nevertheless, even those of us who believe in interpreting history in general categories must bridle at such cavalier gestures.

In detail, too, Hagen's inferences are vulnerable. He analyzes the characteristics of entrepreneurs in 18th-century England, for instance, and finds that Nonconformists are heavily represented. This fact presumably supports Weber's thesis concerning the importance of religious dogma and Hagen's thesis concerning the importance of psychological needs for achievement and autonomy that stem from a disadvantaged status position. Then he turns to the Scottish entrepreneurs of the period (for 12 of which he has relevant information), and notes that a majority were not members of the established Presbyterian church but of minority and presumably disadvantaged religious groups. From this he concludes that "the common denominator is not dogma but independence—in psychological terms, need [for] autonomy." He then adds that "this conclusion countering the Weberian thesis is perhaps the most exciting addition to previous analysis suggested by the statistical study." I feel a twinge of pity for those 12 poor Scottish entrepreneurs, who have to support such a heavy conclusion all by themselves.

To his credit, Hagen consistently relates personality and social structure. Yet the most pervasive flaw in his approach lies in the *way* in which he relates the two. He displays a disquieting readiness to infer psychological states directly from social structure, and vice versa. For instance, he remarks that Burmese males "were not certain of their manliness." On the basis of this psychological fact, he attempts to explain several social facts—frequent marital infidelity, the institution of celibate monkhood, and the "meticulous attention to relative social rankings and extreme deference to the judgment and will of persons of superior rank." Or, reasoning the other way, Hagen infers the following psychological facts from the existence of a situation of colonial domination: "The father [in the dominated country] subjected to the most severe withdrawal of status recognition *must* have reacted with especial severity in his home. Denied other channels for his need dominance and his rage, he *must* have asserted them in the home with extreme harshness" (italics mine). Such statements rest on no psychological data and fly in the face of what we know about the variation in psychological reactions to the stresses of the colonial situation.

Hagen formalizes this flaw in an appendix to chapter 4, in which he asserts that, if a society is not changing, it is possible to deduce knowledge of the social structure from knowledge of personalities, and vice versa. If one set of facts is known, "specifying the other . . . is redundant." Reasoning thus, we should be able to deduce the level of racial discrimination in the United States (a social fact) from a knowledge of the level of antagonism of whites toward Negroes (a psychological fact). Or alternatively, we could deduce the level of antagonism from a knowledge of the level of discrimination. But it is well known that much discrimination is practiced by nonantagonistic people and that many antagonistic people do not discriminate. To assume a one-to-one correspondence between social structure and personality, then, leads to gross errors. But Hagen relies on this assumption of mutual reductionism in principle and in practice. To my mind this is the main reason why, in the last analysis, the volume is so unconvincing.

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Research Resume

Advances in Comparative Physiology and Biochemistry. vol. 1. Otto Lowenstein, Ed. Academic Press, New York, 1962. xii + 392 pp. Illus. $12.

This volume is the first in a projected series, *Advances in Comparative Physiology and Biochemistry*, under the editorship of Otto Lowenstein. The balance between review articles and experimental papers in any field is difficult to maintain. In comparative physiology, reviews have formerly been published in biological review journals and in monographs. Recently a series of books on the physiology of special groups of animals has been initiated; volumes on the physiology of fishes, crustaceans, and birds have appeared, and one on mollusks is in preparation. The *Annual Review of Physiology* carries two chapters on selected topics in comparative physiology. The present volume is no substitute for a text, although it may replace some monographs, and it will do much to establish the series. The style is more discursive and critical that that of the *Annual Review of Physiology*, and illustrations are included. All of the contributors are British, and one wonders whether, in view of the difficulty of getting two comparative physiologists to contribute each year to the *Annual Review of Physiology*, an annual publication with papers by five or six authors can be maintained.

The chapter by G. M. Hughes and G. Shelton on respiratory mechanisms and their nervous control in fish impressed me as much better than the corresponding treatment in the book *Physiology of Fishes*; the chapter by Hughes and Shelton is critical, it is replete with new suggestions and interpretations, and it includes much on cardiovascular as well as on respiratory and nervous physiology. The chapter by R. W. Murray on temperature receptors is also outstanding in its coverage and theoretical treatment of mechanisms of temperature sense. E. J. W. Barrington presents a phyletic survey of digestive enzymes and includes a discussion of control of enzyme levels. H. Blaschko's chapter on amine oxidases in mammalian blood plasma deals with a more restricted subject than the other chapters and introduces comparative biochemists to a little-known topic; however, the physiological significance of these enzymes is uncertain.

The lag between the writing of these reviews and their publication is 1½ to 2 years—much longer than for the *Annual Review of Physiology*. A few references to 1961 papers have been inserted. For example, G. Hoyle critically reviews neuromuscular physiology from the time his well-known monograph was published (completed in mid-1956) to the beginning of 1960. He makes one serious error in reporting my work on two muscles of very different properties in *Golfingia*, by supposing they are the same muscle. J. A. C. Nicol presents a good survey of the often-reviewed subject of animal luminescence, but it is unfortunate that he wrote before the McElroy-Glass volume on light and life appeared. In such a rapidly advancing field as compara-

tive physiology, the value of a review decreases sharply if the delay between writing and publication is more than 6 months.

This series may well become a standard source of reviews for teachers, researchers, and students in the field. Its success will depend on whether the initial high quality can be maintained and on whether the publishers can markedly reduce the delay in publication. Such volumes have only a transient usefulness, and they would be more widely purchased if a less expensive format and binding were used.

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Health Care and Government

Socialized Medicine in England and Wales. The National Health Service, 1948–1961. Almont Lindsey. University of North Carolina Press, Chapel Hill, 1962. xiii + 561 pp. $8.50.

This 474-page book, which, in addition, has extensive footnotes and a long bibliography, is an attempt by an American historian, Almont Lindsey, to review the 13 years' experience of England and Wales with their National Health Service. Scotland was omitted because of certain technical differences in the organization of its service.

The author quotes extensively from publications, but he writes fluently and incorporates the quotations smoothly into his text so that the book reads easily and retains its scholarly documentation.

From the outset Lindsey seems to favor the idea of the National Health Service, and he is frankly impatient with some of the attitudes of the British Medical Association at the time of the inception of the service. His approach is not as impartial as Harry Eckstein's (*The English Health Service: Its Origins, Structure, and Achievements*. Harvard University Press, 1958), yet his occasional expression of personal opinion enlivens the prose and stimulates the interest of the reader. The author could have given somewhat more attention to the organization of the British Medical Association. Indeed, a detailed study of the organization of professional health societies in Britain and in the United States of America would be very illuminating. It is not clear, for example, from this book, what the British Medical Association's relationship is to the medical profession as a whole even though considerable attention is devoted to the Association. In addition, it is apparent that the Health Service is being given credit for advances in medical care which have also occurred in other medical care settings.

The author makes the important point that health care in England and Wales is considered to be a right of all people regardless of their ability to pay. One can conclude from his data that, while this principle is accepted, the definition of health needs by the health authorities was neglected. In the interest of objectivity, the author might well have explored this matter further. In fact, the medical profession in England and Scotland has been pioneering in the study of health needs, in itself a most difficult subject that has been neglected until recently, especially in this country. One could not, of course, expect the author, a historian, to discourse on the subject of why, in the instance of three patients with presumably identical headaches, one patient will go about his business, the second will take aspirin, and the third will stop work and visit his doctor. Yet these factors, impossible at the present time to quantitate, are important in the fiscal problems that have beset the National Health Service, and it is well that Great Britain saw fit to plunge into this unknown sea to obtain information that will be of help to other countries in planning medical care programs. It is unfortunate that adequate research into these matters could not have been carried out prior to starting the National Health Service. However, the author shows clearly that many years of thinking and planning preceded the establishment of the National Health Service but that, in spite of this, the demands of the people for health service legislation could not await all of the answers.

Although the author does not stress the point, he makes it clear that the hospitals of Britain were socialized and that the profession was socialized, if at all, to a lesser extent. Moreover, in the book adequate attention is given to the dental, pharmaceutical, and other aspects of the health care program.

Finally, the clear picture that the reader is given of the English scene preceding the development of the National Health Service points up the differences between Britain and this country. Thus, students of health care in this country will find the book valuable, since Britain is well ahead of us in these areas: for example, the Ministry of Health was established in Britain in 1911.

That a historian should devote his talents to a study of health care is salutory and reflects a growing awareness that history had much to do with health and that health has much to do with history. It reflects also an important trend of nonmedical scholars becoming more and more interested in the problems of the health professions. The biochemist followed such a course some years ago, and look at what they have contributed to medical science.

The book's long and thorough documentation makes it valuable to the serious scholar in this field. The final chapter is an excellent summary of the many points made, and, although the author's enthusiasm for the program in England and Wales stands out especially in this part of the book, the busy physician will find it well worth his time to read this chapter.

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Political and Economic Change

The Underprivileged Nations. Pierre Moussa. Translated from the French by Alan Braley. Sidgwick and Jackson, London, 1962. xxi + 198 pp. Illus. 30s.

This is a translation of Moussa's nontechnical and policy-oriented but quite information-laden *Les Nations proletaires* (1959).

Noting the instability of the prices of raw commodities exported by nonindustrial nations, the author advocates agreements to stabilize prices (perhaps at levels about 25 percent higher than those now current); he apparently rejects the alternative of expending evenly over time the funds gotten from exports, and he neglects the adverse repercussions of stabilizing prices (chapters 1 and 2). Agrarian reform, together with its objectives and possible effects, is touched upon (chapter 4), and replacement of middlemen by ag-