National Health Service, contributes an interesting and too brief reminiscence of early problems. Godber, the Chief Medical Officer of England and Wales, has supplied a speech that provides a very interesting and well-informed view on the current problems of the National Health Service. There are a few other good essays by capable people who have long been concerned with the service. One can also find statistics on the number of ambulances, the number of patients carried, and the miles driven for certain years. Some of the authors have padded their rather short essays by inserting Ministry of Health memoranda or extensive quotes from other well-known documents. The following is an example of some of the banalities encountered in the discussions of special services: "Methods of teaching should follow modern educational methods with much more emphasis on class participation and student projects."

It is difficult to recommend this book. The good papers have mostly been published elsewhere, and the remainder are routine descriptions of component divisions of the National Health Service. A "stock-taking" should take stock. Only a minority of these contributions fill the bill.

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Study of Animal Societies

Social Behavior and Organization Among Vertebrates. William Etkin, Ed. University of Chicago Press, Chicago, 1964. xii + 307 pp. Illus. $7.50.

There is every sign of a revival of interest in the comparative study of animal societies and in the genetic, structural, and behavioral correlates of the various types of social systems that occur. New ideas are being put forward on the genetics and ecology of cooperative and competitive behavior, polygyny and monogamy, the energetics of sexual dimorphism, and the evolution of parental care. Since Huxley and Mayr and others in the late 1930's and the early 1940's summarized the conclusions of a generation of post-Darwinian investigations on such things as mating systems, sexual selection and the evolution of sexual dimorphism, there has been something of an eclipse. The intervening years have seen dramatic advances in the fine analysis of behavioral mechanisms and their physiological substrates and, with some notable exceptions, a relative neglect of the nature and significance of different types of social systems.

Social Behavior and Organization Among Vertebrates is a kind of hybrid between the two types of emphasis. Four of its ten chapters deal with physiological themes. Etkin reviews vertebrate neuroendocrine systems, with little emphasis on behavioral correlates. David Davis writes on the physiological analysis of aggressive behavior, developing the discovery that pituitary gonadotrophins have direct effects upon the aggressive behavior of birds and summarizing recent work on effects of aggressive interaction on reproduction and mortality. Frank Beach considers the neural and hormonal mechanisms that underly mammalian sexual behavior. In interpreting the so-called hypersexuality of animals with lesions in the pyriform cortex, Beach brings out the need for sophisticated behavioral description, both before and after operation. Daniel Lehrman explores the mechanisms of hormonal action in the reproduction of birds and mammals and the role of environmental stimuli, both present and past, in the control of the patterns of hormonal secretion that underly cycles of breeding activity. Among the less physiologically oriented chapters, those by Niko Tinbergen, on the evolution of signalling devices, and J. P. Scott, on the effects of early experience, are both up to date, providing students with clear reviews of such subjects as the origin and ritualization of signal systems and the role of early social experience in mammalian development.

The remaining four chapters (by Etkin), which come closest to the theme in the title of the book, are more in the nature of historical reviews. In the section on cooperation and competition in social behavior, Allee's works loom large, but the discussion of territory fails to come to grips with the problems of function and definition which are a current source of concern for behaviorists and ecologists. The review of reproductive behaviors brings in recent work, within a framework that will be familiar, for example, to readers of E. A. Armstrong's 1947 book on bird display and behavior. The concluding "important general principle that the type of sexual dimorphism shown by a species correlates with the role of the sexes in courtship and parental activities" was anticipated by Darwin and Wallace, among others.

A chapter on the theories of animal socialization and communication reviews the highly influential ideas of European ethology, more or less as those ideas were summarized in Tinbergen's 1951 book, with some more recent illustrations included. In the last section, on types of social organization in birds and mammals, the social systems of several species and their correlates are outlined; the section concludes with a discussion of their relevance to the evolution of early human societies.

It is regrettable that the parts of this book dealing with the comparative study of social systems mostly take a historical viewpoint rather than emphasizing the new developments that I at least believe are emerging. Nevertheless, the subject has not been brought together in this way before, and the juxtaposition of highly critical, experimentally oriented discussions with the broader, inductive treatment of evolutionary problems will serve to remind students how much still remains to be done before we can understand the adaptive significance of different types of social systems.

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Paleopathology

Bones, Bodies, and Disease. Evidence of disease and abnormality in early man. Calvin Wells. Praeger, New York, 1964. 288 pp. Illus. $6.95.

Because so much of the writing about disease in skeletons is unreliable, I fully expected the present book, a popular presentation, to be more of the same. It is a pleasure therefore to say at the outset of this review that Wells has produced a generally reliable, wide-ranging, and quite readable account. Undoubtedly this result is due to his combined training in medicine and anthropology, as well as to his experience as a lecturer. Training in either medicine or anthropology by itself does not qualify a person to deal

adequately with such a complex subject.

Before going into details, I should outline the layout of the book. With the admission that some diseases are still more or less mysterious, the author uses a system of classification that is based essentially on underlying cause—congenital abnormalities, injury, infection, degenerative conditions, growths, deficiency diseases, metabolic and endocrine disorders, and conditions of unknown origin. These subjects are covered in 130 pages. This leaves about 50 pages of text for consideration of several fascinating but not strictly pathological conditions: skeletal adaptations, cannibalism, trephination, radiographic evidence, artificial interference, vital statistics, and historical characters (that is, the remains of known persons). The last 100 pages include extensive notes on the 88 fine photographs, a 6-page glossary, a 12-page bibliography (104 titles) arranged by chapters, and an 8-page index. No references are cited in the text, and references to illustrations appear on the margins of the pages.

The primary evidence of ancient disease is, of course, bones and mummies. In addition to these, Wells considers, with laudable caution, the secondary evidence of documents and artifacts. "It is important not to overrate the value of the early manuscripts," he says, "and lest it should seem that they are dismissed here in too cavalier a fashion it is worth emphasizing that under a guise of adroit lucidity they often turn out to be monsters of ambiguity, little better than inkblot tests which can mean all things to all men" (p. 30).

He feels much the same about artifacts. "It is inherent in the arts that some forms, primitive no less than modern, are more naturalistic than others. . . . The filiform style of the Jabbaren frescoes in mid-Sahara could only lead to a diagnosis of some wasting disease associated, perhaps, with an endocrine growth disorder, but it is clear that in reality these slender, emaciated figures are as much a convention as the chubby putti of the Italian Baroque" (pp. 30 and 31).

This sort of sensible interpretation contributes much to the value of the book. I can only applaud such statements as the following one: "The vast majority of skeletons, even when showing gross pathological changes—which most do not—seldom reveal what the person died from. In a very small proportion of all specimens, signs of advanced tuberculosis or some other infection, or the rare case of malignancy, may permit the cause of death to be inferred with fair probability" (p. 47).

These quotations illustrate, besides a proper point of view, a gift for clear, vivid writing. Another example, which introduces the subject of artificial interference, is worth adding for emphasis of this gift:

> In all ages man seems to have been discontented with his body. Graced neither with the iridescent splendour of the lepidoptera nor the flamboyant plumage of the Paradiseidae, he has sought instead to enhance nature by art and in the pursuit of a kaleidoscopic ideal has flirted with the limits of ingenuity and the bizarre. Artificial interference with the body embraces an astonishing range of procedures from the titivation of an eyelash to the monstrous deformation of a whole skull, from nail painting with delicate crimson or silver lacquers to gross mutilations of hands and feet, from hair tinting to tooth ablation. Few places and fewer peoples can be found where the unadorned body either of man or woman has been viewed with satisfaction (p. 161).

Offsetting all this praise are a few criticisms. However, I would stress that my adverse comments do not detract from the value of the book for the general reader; they are of importance mainly to paleopathologists. Wells, for all his good judgment and knowledge of his subject, "for the sake of clarity" continually frustrates his professional readers by failing to reveal the sources of much of the information that is given. Among a goodly number of statements that I would like to have amplified are two which fall within my experience. On page 125 Wells says that "In the west Texan cave-dwellers scurvy was a prominent factor in their oral hygiene." I am inclined to doubt this claim until I know who made the observation, because scurvy was very uncommon among American Indians. Again, on page 172, there is a remarkable statement—"In a mandible from Copan, Honduras, a missing left lateral incisor had been replaced in the socket by a false one carved from brown stone. The incrustation of tartar showed that the tooth had been in use for some considerable period during the life of the patient." A thing of this sort is so unlikely that it should not be cited without qualification or good documentation.

An extension of this criticism, of course, is the incompleteness of the bibliography. One clear case will serve as an example: Several references in the text to the Pecos Pueblo work of Hooton are not covered by a reference. To this defect must be added another —namely, failure to give the best reference in some cases. For instance, Rubín de la Borbolla (1940) is cited in support of types of tooth mutilation found in Mexico, whereas Romero has recently treated this subject much more exhaustively.

It is certainly to be hoped that this fine popular effort will encourage Wells to produce a fuller and more technical account of the vast amount of evidence which he evidently has assembled. Nothing of the sort has appeared in the English language since Moodie's *Paleopathology: An Introduction to the Study of Ancient Evidences of Disease* (1923).

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Educating Gifted Children

Educating the Gifted. A book of readings. Joseph L. French, Ed. Holt, Rinehart, and Winston, New York, ed. 2, 1964. xiv + 514 pp. $7.35

This collection of 43 readings is a revision of an earlier (1959) edition. Only nine of the original 59 articles have been retained in the revision, and two-thirds of the 34 new articles were published after 1960. The papers are arranged in eight sections, and each section is preceded by several pages of introductory editorial remarks.

The three journals accounting for the largest numbers of articles are *Exceptional Children* (5), *The School Review* (4), and the *Teachers College Record* (4). No articles were selected from the *Journal of Educational Psychology, Educational and Psychological Measurement,* or any similar periodical devoted primarily to systematic empirical research in educational psychology. This bias is partly a reflection of the status of the field itself: that is, problems related to "the gifted" have until recently been the concern mainly of teachers, guidance personnel, and professional educators, with but a few notable exceptions (for example, the work of Terman). Nevertheless, the collection would have been strengthened by inclusion of some of the more