Haida rank and potlatch; cultural evolution; and cross-language parallels in parental kin terms.

Many of the reprinted papers are widely known among anthropologists; there is space to comment on only a few specific contributions. A recent study of Tenino shamanism exemplifies the author's sensitivity to ethnographic problems. Murdock saw that there was a discrepancy between the usual stereotype of the shaman as a neurotic witch doctor and the upright, responsible character of his Tenino shaman informant. Convinced that personal characteristics such as honesty, responsibility, and judgment were typical of shamans in this culture, he sought an explanation for the apparent anomaly in other customs. Two features were particularly significant: (i) the selection process whereby neophyte shamans were examined by established practitioners and unstable candidates eliminated; (ii) the part played by shamans in social control through the practice of in-group sorcery, which served a judicial function among the loosely organized Tenino. The author's long interest in the clarification of concepts in the field of social organization is well represented by one paper, "Cognatic forms of social organization" (1960), where refractory problems in the analysis of non-unilineal descent are reassessed, and an important typology of cognatic systems developed.

The problem of family and marital instability in non-European cultures offers Murdock an opportunity to demonstrate the efficiency of the Human Relations Area Files for cross-cultural comparison. In an incredibly short time, a sample of 40 representative cultures was assembled from the file, data on divorce was analyzed, and a paper was prepared for publication. In addition to documenting cultural extremes in divorce practices (from no permissible divorce among Inca to a premium on brittle marriage among Crow Indians), the author explodes the myth of the "oppressed aboriginal woman," for she has rights with respect to divorce equal to those of her husband in most societies; and he shows that the incidence of divorce in the United States is not alarming when viewed in the context of the incidence in other, presumably stable, societies.

The book contains only one article that has not been published previously; in that article Murdock attacks the concept of cultural relativity with his customary vigor. Rejecting both the "sentimental" formulations of Herskovits ("that all cultures must be accorded equal 'dignity' and equal 'validity,'" p. 146) and the more "hard-boiled" version of Sumner, he proposes an attempt to salvage the concept by means of research anchored in established principles of culture change. Scientific exploration of the choices people actually make when there is an opportunity for decision may yield valid measures of "the adaptive value and satisfaction-yielding quality of different ways of life and their component elements" (p. 150).

Readers need not agree with the theoretical stance espoused in these papers to find stimulation and value in them. Dealing with theoretical and methodological issues, Murdock is forthright and often convincing; in controversy, he is a doughty antagonist. The hortatory tone that obtrudes in some essays is, perhaps, not unbecoming in one who has devoted himself so wholeheartedly to making anthropology a science.

Alexander Spoehr, a colleague at the University of Pittsburgh, has written an appreciative foreword. Brief introductory comments by Murdock help to place each essay in perspective, and there is an informative autobiographical sketch.

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History of Medicine

Malaria in Vietnam and epidemic cerebrospinal meningitis in American army camps at home remind us that the battle against the microbial agents of disease is another human conflict that is far from won. In fact, the war against disease is perhaps man's most ancient struggle.

In straightforward prose, P. E. Baldry, the author of this book, **The Battle Against Bacteria** [Cambridge University Press, New York, 1965. 112 pp., $1.95 (paper); $4.50 (cloth)], tells the story of man's early attempts to deal with epidemic diseases, of Antony van Leeuwenhoek's discovery of microbes in 1676, and of the establishment of a causal relationship between bacteria and disease, 200 years later, through the efforts of Robert Koch, Louis Pasteur, Joseph Lister, and others too numerous to mention here.

This part of the story is told in 26 pages of adequate but well-compressed text. The rest of the book is devoted to an account of the discovery of defensive measures, especially chemotherapeutic agents and antibiotics. In the final chapter Baldry, who is an English physician, points out that, although many infectious diseases have been brought under control, the battle is far from won because drug-resistant germs continue to crop up and thereby force us to develop new and more potent drugs. Furthermore, the conquest of many infectious diseases has contributed greatly to the population explosion, resulting in far-reaching and complex social problems, thus giving these victories a Pyrrhic aspect.

This is a nice little book, and the availability of the paperback edition affords it a good chance of reaching the wider audience that it deserves.

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Modern Biology

The primary aim of L. L. Langley, the author of **Homeostasis** (Reinhold, New York, 1965. 126 pp., $1.95), is to present the concept of homeostasis to undergraduate students of biology. In this he succeeds.

A number of examples of homeostatic mechanisms are presented. These examples vary in effectiveness. The chapters on blood pressure, respiration, and body fluid are, on the whole, well done. The remaining chapters could be improved.

The preface states this is not a text in physiology. Complete coverage is therefore unnecessary. The chapter on hormones, for example, discusses the control of menstruation far too briefly to provide real understanding for the uninitiated. The chapter would be much more effective if the control of one endocrine gland were discussed in depth. As presented, the endocrine system is comprehensively reviewed but in a manner so abbreviated that it is difficult to understand.

Because temperature control involves several organ systems, it would be advantageous to present it later in the volume. With this exception, the principal defect in this chapter is the failure to provide a clear treatment

of the role of central receptors in temperature regulation.

The important metabolic role of adipose tissue is completely ignored in the chapter on body weight, and this chapter needs extensive revision to prevent students being left with the dated notion that fat is an inert depot.

Because undergraduate students are not familiar enough with some of the clinical illustrations used in the latter half of the book, these illustrations will not be helpful.

The important concept of homeostasis is often inadequately presented to undergraduate students of biology. With guidance from an instructor who utilizes the best parts of this volume, homeostatic mechanisms can be presented in an interesting fashion. A revised volume based on experience with the present one should prove even more useful.

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The Collected Works of Lord Rutherford

The two previously published volumes of the collected works of Lord Rutherford describe his activity from the beginning of his career to his removal to the Cavendish Laboratory in Cambridge. This volume, **The Collected Papers of Lord Rutherford of Nelson**, vol. 3, *Cambridge* [Interscience (Wiley), New York, 1965. 428 pp., $15], covers the period at Cambridge University. All three volumes were published under the direction of Sir James Chadwick.

Rutherford, for all his self-confidence, may have thought sometimes that his predecessors were Maxwell, Rayleigh, and J. J. Thomson; the latter, in fact, was physically present in the laboratory and outlived Rutherford. The tradition was thus glorious but not easy to continue or to improve. However, Rutherford, 48 years old when he arrived in Cambridge, and at the peak of his powers, was no person to look at the past of his new laboratory. If anything he might have thought of his own incomparable achievements at Manchester.

Appropriately, the volume opens with a reproduction of the famous Bakerian Lecture of 1920, which reviews the past achievements mainly from the Manchester period, describes the continuation of disintegration experiments at Cambridge, and proposes some interesting new ideas and speculations, which were present to Chadwick's mind at the time of the discovery of the neutron.

The papers that follow describe early disintegration work in the spirit of, and with techniques similar to those used in, Manchester. On page 136, we find for the first time, in a paper dated April 1925, the word "proton." We also see the increasing prominence of some of Lord Rutherford's great pupils —for example, Chadwick and Blackett. By 1930, the techniques have begun to change: the linear amplifier of Wynn Williams and Ward, the accelerator of Cockcroft and Walton appear. New faces are seen every year in the group pictures of "Cavendish Research Students" reproduced in the volume; but the hard core of the lab staff does not change, and in the first row we find, for example, in 1932, the year of the discovery of the neutron, J. A. Ratcliffe, P. Kapitza, R. Ladenberg, Professor Sir J. J. Thomson, Professor Lord Rutherford, Professor C. T. R. Wilson, F. W. Aston, C. D. Ellis, P. M. S. Blackett, and J. D. Cockcroft. Anybody who has visited the Cavendish Laboratory will not be surprised that in almost all papers Mr. Crowe is thanked for his technical assistance. Other pictures show a pleasant reunion with some older pupils and friends such as Hahn, Geiger, Hevesy, and Meitner. The picture of the Solvay Conference of 1933 shows most of the protagonists of the post-Rutherford era.

The later papers in the volume, to 1937, the year of Lord Rutherford's nearly sudden death, are concerned with the clarification of the early work on transmutation of light elements. Particularly interesting is the riddle of hydrogen-3 and helium-3, both produced by the D-D reaction. Lord Rutherford did not live to see which one was stable.

The volume is a worthy companion of the first two. It completes the republication of the scientific papers. A fourth volume, which will complete the work, will contain nonscientific addresses, indexes, and other similar material.

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History of Science

How many scholars are willing to admit in print that they had fun working on a book? Marjorie Hope Nicolson says it frankly in the preface to her book, **Pepys' Diary and the New Science** (University Press of Virginia, Charlottesville, 1965. 206 pp., $5), and her readers will share her fun.

Ever since the publication of *Lady Conway's Letters* (1930), and despite heavy administrative duties at Smith College and Columbia University, Miss Nicolson has utilized, in book after book, her mastery of English literature and the world of the later Stuarts. She has been in the forefront of those noting the interactions of the new science of the 17th century on English thought and expression. In this volume, Miss Nicolson, who is now at the Institute for Advanced Studies in Princeton, presents the Page-Barbour Foundation lectures that she gave at the University of Virginia in 1965.

Richly supported by primary material Miss Nicolson writes successive chapters on Samuel Pepys, amateur of science, on the first blood transfusions, and "Mad Madge" and "The Wits." In an appendix she adds a vivid account of Pepys, Sir William Petty, and the "Double Bottom," Petty's scheme for a new kind of ship. Her account of the blood transfusions is notably lucid and full from the point of view of both Pepys and his contemporaries. Throughout the book quotations from ballads, letters poetry, and even doggerel are interwoven with excerpts from the *Diary*. As the latter covers only the years from 1660 to the end of May 1669, she had to use other contemporary records for Pepys' later years. Her emphasis, however, is on that first formative decade of the Royal Society with its assembly of lovers of science, truly amateurs, and the few genuine scientists of that time. She moves among the records of these people with the familiarity gained from years of association with them in her work. Indeed, her zest for the period guides the reader through her narrative with the ease and charm of a hostess introducing a guest to her friends and, as she does so, acquainting him with the reasons for their presence there.

A minor regret is that in issuing the lectures in book form the author has not curtailed the use of a device which her audiences may have wel-