mental unity of the Chinese people and believed that the methods he had used had preserved this unity. He knew mistakes had been made; the whole object of the rectification campaign was to prevent their recurrence. But he firmly believed that the conventional Communist formula—often criticized during the 'Hundred Flowers' period—that achievements were primary and defects secondary really corresponded to the facts."

Neither author fully brings out a feature of the communist system which would have provided a strong motive for Mao's policy, if this view of his beliefs is correct. It is clear, even from official communist sources, that local cadres often abused their powers and created grievances which the leadership was willing to remedy when it found out about them and that, because of the suppression of criticism, it was often a very long time before the leadership did find out. If Mao believed that the communist system had been generally accepted and that the bulk of criticism would be directed against defects which the leadership was willing to correct, then he could, quite logically, conclude that freedom of criticism would actually strengthen the regime.

In fact, a great deal of the criticism attacked the basis of the communist system, and it came not only from the older intellectuals, which the communists could have explained away as the result of bourgeois background, but also from students, peasants and workers, and even from some Communist Party members of long standing. MacFarquhar gives a large sample of the criticisms which appeared, and Chou gives a summary with a number of quotations.

During May 1957, when people had found that it was possible to criticise without immediate reprisals, both the volume and the seriousness of criticism increased exponentially. At the beginning of June the Communist Party reacted with the "anti-rightest" campaign. The critics were attacked, dismissed from their positions, and forced to make new and humiliating confessions. The period of comparative freedom was followed by the strict enforcement of official orthodoxy and of complete subservience to the party and by the violent denunciations of revisionism, which have continued up to the present.

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General Theory of Banach Algebras. Charles E. Rickart Van Nostrand, New York, 1960. 405 pp. $10.50.

This book, as the title suggests, is entirely devoted to the general theory of Banach algebras. During the 1930's algebras of operators defined on a Hilbert space, that is, special Banach algebras, were extensively studied by von Neumann and Murray. The abstract definition of this concept was given by Nagumo in 1936. But it was not until 1941 that Gelfand, in an epoch-making article, laid the foundations for a general theory of Banach algebras. Gelfand's new approach consisted of the full use of the techniques of elementary ideal theory. In particular, the applications which Gelfand made of his theory to give elegant proofs of some very deep theorems of Wiener in the theory of Fourier series and the theory of Tauberian theorems attracted a great deal of attention. Moreover, Gelfand's applications established the usefulness of algebraic methods in certain areas of analysis.

The book under review consists of four chapters and an appendix. In chapter 1 ("Fundamentals," pages 1–38) the general definitions and notions of the theory are given. This chapter contains a detailed study of the motion of the spectrum of an element of a Banach algebra culminating in a simple proof (due to the author) of Gelfand and Mazur's theorem that a normed division algebra over the complex field is isomorphic to the complex field. The algebraic foundations of the theory are given in chapter 2 ("The radical, semi-simplicity and the structure spaces," pages 41–96). In this chapter the author presents a large amount of material that previously was available only in articles scattered in many periodicals. The theory presented in chapter 2 is applied in chapter 3 ("Commutative Banach algebras," pages 108–173) to obtain Gelfand's original theory of commutative Banach algebras. In addition to this, chapter 3 contains a detailed discussion of the theory of the Šilov boundary and of the theory of completely regular algebras. Algebras with involutions, such as algebras of bounded operators, are studied in chapter 4 ("Algebra with an involution," pages 178–260). This chapter contains Kaplansky's and Fukamiya's proof of Gelfand and Naimark's conjecture that every B*—algebra is symmetric. The author has refrained from giving a detailed account of the theory of special algebras, such as the von Neumann algebras, algebras of continuous functions, and group algebras because three books, each devoted to the general theory of one of these special algebras, have been published. However, a brief account of each theory is given in three separate paragraphs collected in the appendix. Since most of the details are omitted in this appendix, it may be looked upon as a source of exercises. A complete bibliography, containing more than 800 titles, concludes the book.

It is Rickart's belief that the development of the general theory of Banach algebras as an independent discipline is to be found in its algebraic development. In this respect the book, particularly in chapter 2, differs remarkably from its Russian counterpart, *Normed Rings* by Naimark (1956; English translation by L. Boron, 1959).

The style of Rickart's book is concise but precise, and those who have an appreciable knowledge of the elements of functional analysis and general ring theory will find that it is not too difficult to read.

The book is an important contribution to the existing literature on this subject; the author and the publisher are to be congratulated for publishing this excellent book.

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Principles of Human Genetics. Curt Stern. Freeman, San Francisco, ed. 2, 1960. x + 753 pp. Illus. $9.50.

For years it has been something of a cliché that man is an unfavorable subject for genetic studies. To be sure, one cannot deliberately plan crossing experiments with successive generations of human beings, as one can with, say, *Drosophila* flies; even if this were possible, the results would be too slow in coming for an experimenter to record them. Yet on the other hand, human materials offer advantages not found in any other material. Much historical information about human families is preserved in many places, from family chronicles to state archives; history has recorded nothing about *Drosophila* genetics. Human morphology and physiology are relatively well known. And more people are interested in man than in any other species; this makes possible greater expenditures of labor and funds

than could be made with anything else. Peas, evening primroses, and rodents were favorite materials with early geneticists; there followed about three decades of supremacy of *Drosophila,* an interlude of *Neurospora* mold, and finally bacteria and viruses. However, there are straws in the wind which seem to point toward human genetics coming next to the forefront.

The first edition of Stern's textbook of human genetics (1949) has become a classic in its field. It has no rival in lucidity, precision, objectivity, and fairness in the presentation of even highly abstruse matters. All these qualities are fully preserved in this second edition, which was necessitated by the remarkably rapid growth and progress in the field. Despite this growth, the volume of the book is only moderately increased—from 604 to 733 pages (excluding the index). The plan of the book remains the same, but we now have 33 chapters. The chapters which have new titles deal with linkage and crossing over, variations in the expression of genes, and the genetic hazards of radiation; two new chapters deal with heredity and environment and selection in civilization. Except in some of the early chapters, much new material has also been added in the chapters retaining their old titles. Altogether, this is not a patch-up job, so often found in new editions of textbooks, but a new and modern text.

Having written some books, I know from sad experience that to write one entirely without errors is superhuman; enough, therefore, to say that the book under review contains no important errors that I noticed. As to the general character of the book, it can be described as scientifically conservative, judicious, tending to adhere to classical lines and to avoid controversial issues. These qualities will appeal to some readers more than to others, according to their predilections, perhaps depending on whether the reader belongs (in the classification of scientists suggested long ago by Ostwald) to the group of "classicists" or to that of "romantics." It may be noted that, in the discussions of the genetic radiation hazards and of the genetic loads, rather limited attention is given to the fundamental problem of the differences between the mutational and the balanced (segregational) fractions, although it is stated that this matter belongs to the class of "uncertainties." The discussion of eugenics is admirably clear, concise, and as uncontroversial as any I have ever read.

It is almost an act of supererogation to say that this book can be highly recommended to those wishing to familiarize themselves with human genetics. It has no rivals. It will be widely read.

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Strategic Psychological Operations and American Foreign Policy. Robert T. Holt and Robert W. Van de Velde. University of Chicago Press, Chicago, Ill., 1960. x + 243 pp. $5.50.

This book is an attempt to state the principles of psychological strategy and to support these principles by reference, on the one hand, to social science research and, on the other hand, to three case studies of major international propaganda operations.

The strategic principles stated in the first three chapters are sensible, sound, and elementary. Readers new to problems of psychological strategy will learn something from them. So will some professionals, for many of these principles are not incorporated in current American practice. For example, the authors treat with proper disdain the notion that the purposes of this country's propaganda are to "sell America" or to create a more favorable image of the United States. They sensibly point out that the psychological instrument of statecraft is one of the major instruments used for achieving all the purposes of foreign policy, but that it is used along with the diplomatic, military, and economic instruments. If, however, professionals in the field of psychological strategy can learn from the introductory chapters, the fact that they can do so testifies to the sad state of the practice of the art (a point which Holt and Van de Velde emphasize), for by more sophisticated standards their summary of social research on persuasion would have to be considered a primer.

Chapter 4 is a rather lengthy blueprint of a table of organization for psychological strategy operations. Since the authors concede that a good program can operate under many different organizations, it is not clear what is gained by blueprinting one generally feasible and sensible organization among many.

The final three chapters, each concerned with a historic case of psychological operations, are intended to illustrate the principles outlined earlier, but the connections are sometimes unclear. The three cases are the American *Psywar* operations in Italy in 1943–45, American operations during the 1948 Italian elections, and Radio Free Europe during the thaw in the cold war. These histories may be useful, though they are not penetrating studies and they do tend to substitute assumption for evidence. This is not so much a criticism of the authors as of the general state of the documentation of public opinion. It is rare indeed, especially for historical cases, that one can find substantial evidence of what public opinion really was. Scholars are often forced, for lack of better evidence, to assume that the propaganda output corresponds to the public reactions. The systematic use of public opinion polls now permits a more faithful documenting of opinion phenomena. Thus, in the Holt–Van de Velde volume, some of the more interesting insights come where they use material from the DOXA polls in Italy.

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Outer Space Photography for the Amateur. Henry E. Paul. Amphoto, New York, 1960. 124 pp. Illus. $2.50.

Henry E. Paul, the author of this volume, knows his subject well and generously shares this knowledge with his readers. Celestial photography has been a hobby of his for over 20 years, and he has known personally most of the outstanding American amateurs in this field. Photographs comprise about 40 percent of the volume's contents, and many of them were made by amateurs.

After devoting the first three of the book's 12 chapters to general background and equipment, the author settles down to discuss the photography of star trails, rockets and satellites, the moon, the sun, eclipses, nebulae and galaxies (and comets and aurorae), and meteors and planets. He tells what kind of equipment is best for each and what type of film to use; he indicates the order of magnitude of the necessary exposure, and he warns the reader against some of the common mistakes.

The errors I found in this book are few and mostly unimportant; for example, on page 64, the suggestion that the exposure for photographing the moon at the first or last quarter should