ures, Herzberg's 80, and Slater's 68.

I am confident that there will be an early demand for a second edition, if it is not stifled by reaction to the unconscionable price of 3 cents per octavo page. In a second edition several improvements should be made in the format: Cross reference can be made easier by printing chapter and section numbers (and perhaps even figure, table, and equation numbers) at the top of each double page; the plates, usually many pages removed from their context, should be collected in one place or always referred to by the number of the facing page; the cumbersome and undoubtedly expensive foldouts should be replaced by two-page spreads; and almost all the lazy tables should be righted so that they can be read without rotation of book or student.

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Man's Family Tree

Ideas on Human Evolution. Selected essays, 1949–1961. William Howells, Ed. Harvard University Press, Cambridge, Mass., 1962. xiii + 555 pp. Illus. $10.

This volume, as its editor—himself a distinguished anthropologist and authority on man—points out in his preface, is intended to survey the views developed on the subject of human evolution during the decade immediately past. It is a range of ideas by leading authorities in this field that the editor aims to present, not primarily data or facts well-known to the profession. Again, as Howells indicates, these "facts" are subject to varying interpretations. In this, save for the range of time represented, they are no different than the facts of written history which have a way of altering their shapes and meaning with the passage of time and human generations that look upon them differently.

The papers making up the volume represent the contributions of renowned foreign and American scholars such as Dobzhansky, Weidenreich, Straus, Schultz, Simpson, Mayr, Gregory, Le Gros Clark, Oakley, Washburn, Vallois, and others equally well known. Their individual subjects range from the Italian Neanderthals to the earliest subhuman phases of man's family tree. Each paper has been skillfully chosen, not alone for content but also for its ability to reveal the provocative and exciting nature of new developments in a field always marked by controversy even after the full acceptance of the evolutionary point of view. The more the number of primate fossils has increased, the more devious and elusive appear the paths by which we may have reached our present status.

There has, furthermore, been an almost unconscious shift in our approach to the human phylogeny. The 19th- and early 20th-century workers were confronted with a paucity of human remains. Scientists were faced, therefore, whether consciously or unconsciously, with the problem of convincing the general public that human evolution was a reality. Until the Pleistocene phase of man's history was explored, it was scarcely possible to grapple satisfactorily with his more remote relationships.

As one studies the papers in this volume, it becomes apparent that the precise point of divergence of the brachiating anthropoids from the less specialized primates, who also gave rise to bipedal man, is still a debatable question, confused by the dangers of mistaking parallelisms for more intimate relationship. In addition, these earlier phases of human history have had to wait upon the examination and analysis of remains closer to us in time. Now at last the hunt goes deeper, but there are still million-year gaps in human history and much room for honest, anatomical difference of opinion.

Howells has done a great service to science by collecting into one volume some of the most important evolutionary papers of our generation. To indicate a few untreated facets of the subject would be only to say that each worker has his own preferences, that any book can contain only so much material, and that vast areas of the world and man's history within it still remain to be explored.

Human ideological differences today obstruct the examination of regions now known to contain great evolutionary secrets. It is a pity that ferocious and irrational nationalisms threaten to stifle one of the most dispassionate of scientific pursuits. No contemporary animus can shift the cusp on a single fossil tooth or change the road by which we have reached our present dubious status. It can serve only to underline the fact that we are still divided, half-world creatures glancing alternately backward into an obscure past and forward into a future that we increasingly tremble to enter. *Ideas on Evolution*, if read with perception, should aid in giving us, if not confidence, at least that long, wide range of philosophical detachment which characterizes the species *sapiens* in some of its nobler moments.

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Economic Statistics

Trends in Natural Resource Commodities. Statistics of prices, output, consumption, foreign trade, and employment in the United States, 1870–1957. Neal Potter and Francis T. Christy, Jr. Johns Hopkins Press, Baltimore, Md., 1962. ix + 568 pp. Illus. $17.50.

Potter and Christy tabulate the production, trade, consumption, prices (at the "wellhead"), and labor required for production of 90 percent (by their estimate) of what we casually call "raw materials." These results are for the United States over essentially the century since the Civil War; no regional distribution is given. The great bulk of the book is concerned with individual commodities. Procedure in resolving conflicts among different sources are, in general, clearly shown; notes keep the reader straight on what is being done; and references provide a wealth of signposts to the background.

The authors are concerned with the economy, with constant-value dollars, gross national product (GNP), and commodities in the market rather than with the resources from which they came. Accordingly, one expects no mention of the acres of open land, of the quality of wilderness, of the frequency of wood thrush songs, or even of how much air remains unused for smog and how much water is still available for contamination. The reader who wants per capita caloric intake will have a struggle, but if he stays with the single commodity tables he can make it.

Only occasionally do difficulties arise—for example, in determining that the statistics given are for rough rice, not for brown rice. Again, hydropower is not mentioned.

Less clear are the summary tables in which trends of groups of materials are considered. It is easy to determine that, among the minerals, the price of sulfur has decreased most and that of anthracite almost least; but when one comes to a ½-percent annual gain in per capita food consumption, one must forget calories and remember this is the farm price, in constant-value dollars, for a group of products that comprised almost half of an agrarian-heavy GNP at the beginning of the period and but an eighth of a services-heavy GNP at the end. What this may mean is not entirely clear.

My only real complaint is the implication, which creeps in several times, that Malthus was wrong, dead wrong. However, an adequate warning is given on page 1 in the statement: "[there are] many arguments to prove that technology can overcome increasing shortages of natural resources ad infinitum." Well, perhaps, but ad infinitum does seem quite a while.

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Notes

Mineral Resources

This third edition of Eugene Raguin's textbook on economic geology, **Geologie des Gites Minéraux** (Masson, Paris, 1961. 686 pp. NF. 80), covers the metals, the semimetals, and some important nonmetallics, but it does not consider mineral fuels. The classification follows that of W. Lindgren, modified slightly by Rankama and Sahama's geochemical classification.

Chapters 1 through 5 give Lindgren's classification and the Rankama-Sahama geochemical additions. Chapter 6 considers various geological classifications and the order of deposition, while the remainder of the book (some 26 chapters) considers various mineral deposits.

Raguin starts off with, and covers in one chapter, what we would call evaporates—potash, halite, gypsum and anhydrite, soda salts, borates, and natural nitrates. Use, production, minerals and tenor, origin, and details of the various occurrences are given; considerably more detail is provided for European deposits than for those in the United States. Under magnesium are considered metallic magnesium, magnesite, talc, sepiolite, and asbestos; fluorite is under calcium as CaF_2; under aluminum we find bauxite, cryolite, corundum rubies, sapphire, topaz, garnet, tourmaline, jadite, and nephrite; under silica, industrial sand, diatomite, tripolite, quartz (agate and opal) clays, kaolins, bleaching clays and bentonites, feldspaths, micas, and vermiculites. One chapter is devoted to each of the following: manganese, graphite, phosphates, and iron, and one chapter to lithium, rubidium, cesium, and beryllium. The rest of the metals and semimetals are similarly treated.

Needless to say the book could well be of value to the American user as a source of information on the occurrence of various minerals, particularly of those found in Europe.

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New Books

Economics and the Social Sciences

Activation and Behavior. Elizabeth Duffy. Wiley, New York, 1962. 401 pp. $7.95.

Affect, Imagery, Consciousness. vol. 1, *The Positive Effects.* Silvan S. Tomkins. Springer, New York, 1962. 533 pp. $8.

The Clinical Use of Dreams. Walter Bonime. Basic Books, New York, 1962. 370 pp. $8.50.

Copper Town: Changing Africa. The human situation on the Rhodesian copperbelt. Hortense Powdermaker. Harper and Row, New York, 1962. 414 pp. Illus. $7.95.

Criminal Interrogation and Confessions. Fred E. Inbau and John E. Reid. Williams and Wilkins, Baltimore, Md., 1962. 226 pp. $6.50.

Educators Guide to Free Social Studies Materials. Compiled and edited by Patricia Horkheimer Suttles. Educators Progress Service, Randolph, Wis., ed. 2, 1962. 402 pp. Paper, $6.75.

Ego Synthesis in Dreams. Richard M. Jones. Schenkman, Cambridge, Mass., 1962. 100 pp. Illus. Paper, $2.45; cloth, $4.50.

The Human Factor in Changing Africa. Melville J. Herskovits. Knopf, New York, 1962. 569 pp. $6.95.

The Humanization of Man. Ashley Montagu. World, New York, 1962. 320 pp. $6.

The Merchant Class of Medieval London. (1300–1500). Sylvia L. Thrupp. Univ. of Michigan Press, Ann Arbor, 1962 (reprint, © 1948). 414 pp. Illus. Paper, $2.25; cloth, $4.40.

The New Exploration. A philosophy of regional planning. Benton MacKaye. Univ. of Illinois Press, Urbana, 1962 (reprint of 1928 ed.). 273 pp. Paper, $1.75.

The Optimistic Tradition and American Youth. Eli Ginzberg, James K. Anderson, and John L. Herma. Columbia Univ. Press, New York, 1962. 170 pp. $3.75.

Prehistoric Religion. A study in prehistoric archeology. E. O. James. Barnes and Noble, New York, 1962. 300 pp. Illus. Paper, $1.95.

Psychological Development in Health and Disease. George L. Engel. Saunders, Philadelphia, 1962. 469 pp. $7.50.

Science and Government. The Godkin lectures at Harvard University, 1960, with a new appendix. C. P. Snow. New American Library, New York (© 1960), 1962. 128 pp. Illus. Paper, 60¢.

General

Income of the Chinese Gentry. Chung-li Chang. Univ. of Washington Press, Seattle, 1962. 386 pp. $7.75.

Life in the Universe. Francis Jackson and Patrick Moore. Norton, New York, 1962. 149 pp. Illus. $3.95.

Man Against Pain. 3000 years of effort to understand and relieve physical suffering. Bernard Seeman. Chilton, Philadelphia, 1962. 209 pp. $3.95.

Man's Physical World. Joseph E. Van Riper. McGraw-Hill, New York, 1962. 646 pp. Illus. $8.50.

The Mind as Nature. Loren Eiseley. Harper and Row, New York, 1962. 60 pp. $2.75.

The Physical World of Late Antiquity. S. Sambursky. Basic Books, New York, 1962. 201 pp. Illus. $5.75.

Pius XII and Technology. Leo J. Haigerty, Ed. Bruce, Milwaukee, Wis., 1962. 270 pp. $4.75.

Retracing Elementary Mathematics. Leon Henkin, W. Norman Smith, Verne J. Varineau, and Michael J. Walsh. Macmillan, New York, 1962. 436 pp. Illus.

Russia and the West under Lenin and Stalin. George F. Kennan. New American Library, New York (© 1960), 1962. 384 pp. Paper, 95¢.

Sahara Story. Edward Ward. Norton, New York, 1962. 192 pp. Illus. $4.50.

Satellites as a Hobby. Lloyd Mallan. Hammond, Maplewood, N.J., 1962. 45 pp. Illus. $1.

Science, a Key to the Future. J. Darrell Barnard, Celia Stendler, Benjamin Spock, and Lon Edwards. Macmillan, New York, 1962. 639 pp. Illus.

Standard Encyclopedia of the World's Oceans and Islands. Anthony Huxley, Ed. Putnam, New York, 1962. 383 pp. Illus. Until 1 January, $9.95; $10.95.

The Structure of Scientific Revolutions. Thomas S. Kuhn. Univ. of Chicago Press, Chicago, 1962. 187 pp. $4.

Themis. A study of the social origins of Greek religion. Jane Ellen Harrison. World, Cleveland, 1962 (reprint of ed. 2, 1927). 595 pp. Illus. $2.45.

Trail Blazers of Technology. The story of nine inventors. Harland Manchester. Scribner, New York, 1962. 215 pp. Illus. $3.50.

Trigonometry Review. Sally Lipsey. Youth Education Systems, Larchmont, N.Y., 1960. 142 pp. Illus. Paper, $1.50.

The Value of Water in Alternative Uses. With special application to water use in the San Juan and Rio Grande basins of New Mexico. Nathaniel Wollman. Univ. of New Mexico Press, Albuquerque, 1962. 448 pp. Illus. $10.