umes now available, which represent the first 20 bulletins, were translated by the Geophysics and Polar Research Center at the University of Wisconsin and Scripta Technica. The work covered was accomplished in the years 1956 to 1960, and the issues were published at irregular intervals between 1958 to 1960. The effort of the U.S.S.R. in Antarctica is second only to that of the United States in total numbers of scientists involved. Russian operations from 1956 to 1960 were concentrated at two permanent coastal stations and one inland site. The latter, Vostok, at the south geomagetic pole, is easily the coldest (to −127°F) station on the surface of the earth.

The 214 articles in the two volumes average a little more than three pages each and are well documented with graphs, tables, and illustrations, although the latter are of poor quality. Most of the articles were written by field personnel, and often they were radioed out from Antarctica. The writers, usually the expedition leaders, program leaders, or candidates for advanced degrees, are well qualified field scientists. Geology, glaciology, meteorology, and oceanography are the best represented subjects, a result of the individual nature of these sciences. The fields of the upper atmosphere sciences, on the other hand, are poorly represented, and, although this is due to the synoptic nature of these studies, it does give a disproportionate view of the overall effort.

Two of the individual bulletins are assigned specific topics. Bulletin No. 3 has rather lengthy abstracts of 30 papers given at the First Conference on Marine Fauna in Antarctica, held in Leningrad in December 1958, with all entries by Soviet scientists. Bulletin No. 15, issued in 1960, is a report on observations conducted by the Soviet Antarctic Expedition in 1957 and 1958. Each of the bulletins, with the exception of the first, has a bibliography that cites from 15 to 25 reports of Soviet Antarctic research results published in technical journals.

Quite a few of the articles are less than a page long and deal with such special phenomena as snow geysers, snow spouts, fog and snow haze, unique aurora coloring, unusual icebergs, and colored snowflakes; they are quite useful and informative and obviously were written in the field. Other articles, which are more extensive and deal in final form with special measurements such as tides in the Mirny region and the magnetic properties of Precambrian rocks, were written by experts after data analysis. The bulk of the articles, however, are preliminary and undoubtedly will be expanded later.

For the U.S.S.R. Antarctic audience, the *Information Bulletin* must be a very popular, easily read, and informative report. The audience in the United States will find the translation immensely helpful in understanding the U.S.S.R. expeditions to the Antarctic, and the agencies and libraries concerned with the region will welcome the volumes. However, for the individual scientist, the volumes are late and expensive, and they deal with an assortment of scientific topics, most of which may be of only marginal interest.

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Chemical Technology

Chemical Applications of Infrared Spectroscopy. C. N. R. Rao. Academic Press, New York, 1963. xiv + 683 pp. Illus. $19.50.

Since the beginning of 1962 at least 15 books have been published which deal exclusively with infrared spectroscopy, and as many more again in which infrared is an important fraction of the subject matter. What, then, does the present volume have to offer which would justify its purchase—especially at the appalling price of $19.50? Two things. It is the best one-volume treatment of chemical applications of infrared spectroscopy currently available. In addition, it contains an exceptionally large number of references and is therefore an excellent place to start a literature survey.

About one-third of the book is an orderly discussion of infrared group frequencies. This treatment is not quite as lengthy as that in the two standard works (Bellamy, and Jones and Sandorfy), but it is slightly more up-to-date, most noticeably for frequencies below 700 cm^{-1}. In addition, there are chapters on the following topics: (i) basic concepts, instrumentation, and techniques (115 pp.); (ii) specific applications in organic chemistry (98 pp.); (iii) specific applications in biochemistry (34 pp.); (iv) high polymers (14 pp.; a weak section); (v) quantitative analysis (17 pp.); and (vi) a series of miscellaneous subjects such as matrix isolation studies, adsorbed molecules, anomalies in solid state spectra (good), and solvent effects. A few final pages deal with the teaching of infrared spectroscopy, but offer relatively little. Rao does not discuss the use of infrared and Raman spectra for vibrational analysis or the determination of molecular symmetry.

Some of the individual topics are handled better in other, more specialized, books. Thus, Potts is more thorough on instrumentation and techniques, and Nakamoto is preferable for inorganic and coordination compounds. However, for a single-volume coverage of *all* chemical applications of infrared spectroscopy, Rao's book is at present unexcelled. It is thorough; I can think of no application that is not mentioned in reasonable detail.

One of the best features is the large number of references. Nearly all of the more than 2500 cited are well chosen, and they extend through 1961. There are also many useful figures and tables. I noted a moderate number of errors, but most were grammatical or typographical and caused no difficulty. Tighter editing by the publisher would have corrected some of them.

The author states that the book is "designed for students, technicians, and research workers as a text or reference work." His aim is to survey the chemical applications of infrared spectroscopy as completely as possible. These are a very broad set of goals, but they have been achieved.

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Techniques for Psychologists

The Design of Electric Circuits in the Behavioral Sciences. Tom N. Cornsweet. Wiley, New York, 1963. xii + 329 pp. Illus. $8.95.

This book was written for researchers and students who have little or no knowledge of electricity. It is obviously directed at psychologists, and why it should be titled for "the behavioral sciences" is not clear, unless the other behavioral sciences are up to no good in ways unknown to me.

In general, this text is characterized by unusually clear exposition of the nature and function of the basic components of electrical circuits and of a variety of simple electrical circuits. The writing is admirably pitched to the

reader who is quite innocent of electrical knowledge. In effect, the reader is referred to commercial suppliers for more complicated equipment, but no list of such suppliers is given, an unfortunate omission. Useful problems are given at the end of most chapters. Generally the text abounds with useful little suggestions and tips that will save the novice from all sorts of major and minor embarrassments, if he can keep this information straight.

Some of this useful material covers holding, time delays, shocking, amplifying, and sensing circuits. But various feedback circuits, multivibrators, and oscillators are not treated, and there is no discussion of relay or switching logic nor any useful treatment of transistor circuits. In short, the book is necessarily selective; what it does cover, it covers very well indeed. The student is introduced to some more complicated equipment and circuits, however; there is an excellent functional description of the oscilloscope and resistance-capacitance time delay circuits and of captured spot tracking of the oscilloscope spot with a photocell controlling the vertical gain.

In sum, I judge that the novice who reads this book and completes the exercises and problems with readily available circuit elements ought to end up with a very useful functional knowledge of simple electrical equipment and circuits, a knowledge which will enable him to construct simple circuits as needed and which will also make him feel more at home with more complicated items that he might incorporate into his apparatus. He will not be able to design circuits in the engineering sense, but he will be able to deal with more technical circuit descriptions more intelligently. For its aims, the book is excellent, but the price seems high.

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Mathematics

Geometric Dissections. Harry Lindgren. Van Nostrand, Princeton, N.J., 1964. x + 165 pp. Illus. $4.95.

This is a fine example of those books that appeal to laymen and professionals alike. The author has eliminated all computational work except in one or two places where he states a result. He has covered the field and omitted little if any material pertaining to possible ways of cutting the regular polygons and reshaping them into others. In a field where general methods may have been lacking, he has tabulated a number of methods of attack—for example, reshaping the polygons into parallelograms that can be placed end to end, forming superposable strips. Another fruitful method is to cut a figure into a tessellation element, a figure that can, with its duplicates, fill the plane.

Lindgren makes the process seem so easy that the reader may lose his sense of amazement at the possibilities in this field. Certainly this danger is inherent in a book in which 400 or more dissections are discussed, mostly in a few lines each. However, there are gems, among them the five-piece dissection of the octagon into the square. The reader often learns more from the superb drawings than from the text.

This book will furnish grist for discussion by the members of mathematics clubs at the high school and the college level. If readers work out an algebraic background for much of this purely geometrical treatment, so much the better.

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New Books

Economics and the Social Sciences

Adaptation-Level Theory. An experimental and systematic approach to behavior. Harry Helson. Harper and Row, New York, 1964. 752 pp. Illus. $10.75.

Alienation and Freedom. The factory worker and his industry. Robert Blauner. Univ. of Chicago Press, Chicago, 1964. 238 pp. Illus. $7.50.

The Archetype. Proceedings, 2nd International Congress for Analytical Psychology (Zürich, Switzerland), August 1962. Adolf Guggenbühl-Craig, Ed. Karger, Basel, Switzerland, 1964 (order from Phiebig, White Plains, N.Y.). 240 pp. Illus. Paper, $8.75.

The Authoritarian Personality. pts. 1 and 2. T. W. Adorno, Else Frenkel-Brunswik, Daniel J. Levinson, and R. Nevitt Sanford. Wiley, New York (© 1950), 1964. pt. 1, 632 pp. pt. 2, 406 pp. Illus. Paper, $2.25 each.

The Cognitive Processes: Readings. Robert J. C. Harper, Charles C. Anderson, Clifford M. Christensen, and Steven M. Hunka. Prentice-Hall, Englewood Cliffs, N.J., 1964. 731 pp. Illus. $8.95. More than 40 essays arranged under the following topic headings: Motivation; Neo-Behavioristic Approaches to Cognition; Information Processing Approach to Cognition; Computer Model; Cognition, Motivation, and Personality and Cognition in Children and Cognitive Development. D. O. Hebb's article, " 'The American Revolution,' should be regarded as part of the preface. His views, which we share fully, have served as a guide for the selection of articles" (from the preface).

Conflict, Decision, and Dissonance. Leon Festinger. Stanford Univ. Press, Stanford, Calif., 1964. 175 pp. $4.75.

Continuities in Cultural Evolution. Margaret Mead. Yale Univ. Press, New Haven, Conn., 1964. 495 pp. Illus. $8.50.

Crime and Personality. H. J. Eysenck. Houghton Mifflin, Boston, 1964. 222 pp. Illus. $4.50.

The Development of Economic Thought. Great economists in perspective. Henry William Spiegel, Ed. Wiley, New York (abridged version of the 1952 edition), 1964. 498 pp. Paper, $2.45.

Educating the Gifted. A book of readings. Joseph L. French, Ed. Holt, Rinehart, and Winston, New York, ed. 2, 1964. 528 pp. $7.35. Selected articles drawn primarily from professional journals and intended "to help educators and intellectually curious parents to sharpen their philosophy of education as it reflects sensitivity both to the needs of individuals within our society and to the facts and principles of education and psychology."

An Ethnology of the Huron Indians, 1615–1649. Bureau of American Ethnology, Bull. 190. Elisabeth Tooker. Smithsonian Institution, Washington, D.C., 1964. 183 pp. Paper, $1 (order from GPO, Washington 25, D.C.).

Fact and Theory in Social Science. Earl W. Count and Gordon T. Bowles, Eds. Syracuse Univ. Press, Syracuse, N.Y., 1964. 269 pp. $5.50.

The Frontiers of Management Psychology. George Fisk, Ed. Harper and Row, New York, 1964. 313 pp. Illus. $6.

Interpreting Personality Theories. Ledford J. Bischof. Harper and Row, New York, 1964. 704 pp. Illus. $7.95.

Iroquois Music and Dance: Ceremonial Arts of Two Seneca Longhouses. Bureau of American Ethnology, Bull. 187. Gertrude P. Kurath. Smithsonian Institution, Washington, D.C., 1964. 282 pp. Illus. Paper, $1.50 (order from GPO, Washington 25, D.C.).

The Language of Psychology. George Mandler and William Kessen. Wiley, New York (© 1959), 1964. 319 pp. Illus. Paper, $1.95.

Learning. Sarnoff A. Mednick. Prentice-Hall, Englewood Cliffs, N.J., 1964. 128 pp. Illus. Paper, $1.50; cloth, $3.95.

Mathematics and Psychology. George A. Miller. Wiley, New York, 1964. 307 pp. Illus. Paper, $3.45; cloth, $5.50.

Method and Measurement in Sociology. Aaron V. Cicourel. Free Press of Glencoe (Macmillan), New York, 1964. 255 pp. $6.95.

Motivation: Theory and Research. C. N. Cofer and M. H. Appley. Wiley, New York, 1964. 970 pp. Illus. $12.50.

The New Science of Economics. An introduction. George Soule. Viking Press, New York, ed. 2, 1964. 223 pp. $4.95.

Personality and Adjustment. Richard S. Lazarus. Prentice-Hall, Englewood Cliffs, N.J., 1963. 128 pp. Illus. Paper, $1.50; cloth, $3.95.