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book, however, in this one some of the rigor seems to have disappeared with the verbozy. As in many other textbooks, a new concept is sometimes introduced by analogy with a more familiar one. This correlation does no harm and may increase the student's understanding, but in several cases Wehr and Richards have provided very little definition of terms beyond the comparison. In general, they have made the material quite easy to read, and their next edition could be an example of lucid writing for others to emulate.

My principal concern is for the role of a course in a physics curriculum at the college level, for which this text would be suitable. By actual page count, a minimum of 142 pages of text and solved problems duplicates the material in an introductory text that is widely used in liberal arts courses. In this case duplication means that no additional facts, no additional reasons justifying a physical model, or no additional limitations inherent in a physical model are presented.

The new material presented in the remaining 214 pages (of which many pages are problems that illustrate the text material) seems too little to justify the use of this book as the text for an additional semester or quarter of work beyond the introductory general physics course, even though the advertising cover suggests this possible use for the book. The book does fulfill another purpose stated on its cover—that of providing suitable supplementary reading for an introductory general physics course.

It is to be hoped that the increase in the amount of mathematics taught in high schools will remove the need for college physics textbooks that avoid mathematical description of phenomena. No one has much insight into the scientist's description of the universe unless he understands a little of the algebraic language in which that description is stated.

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can Anthropological Association and the American Dietetic Association is considering a joint program on "Cultural Influence on the Diet" of interest to anthropologists and psychologists, probably the morning of 28 December.

Psychology (I)

The primary program of Section I (Frank W. Finger, University of Virginia) will consist of four symposia and the vice-presidential address. Ledyard R. Tucker (University of Illinois) has arranged a symposium for 29 December on "Investigation of Experimental Psychological Problems by Multivariate Techniques." Participants will include R. Darrell Bock (University of North Carolina), "Behavioral applications of multivariate analysis of variance"; Maurice Lev (Northwestern University and University of Chicago) and H. J. A. Rimoldi (Loyola University, Chicago), "Application of multivariate analysis to the study of pathology of the heart"; J. E. Keith Smith (Massachusetts Institute of Technology), "Multidimensional analysis of similarity."

On the same day will be held a session on "Learning Research Related to Educational Improvement," arranged by Lee J. Cronbach (University of Illinois); the vice-presidential address by Lloyd Humphreys (University of Illinois) which is entitled "Problems posed to experimental psychology by the evidence for trait instability."

Topics for the symposia on 30 December are "The Development of Visual Perception in Children" arranged by Herschel Leibowitz (Pennsylvania State University) and "Engineering Psychology: Contributions of an Infant Science" arranged by Lowell Schipper (Pennsylvania State University).

Social and Economic Sciences (K)

Section K (Ithiel de Sola Pool, Massachusetts Institute of Technology) has the responsibility this year of arranging the interdisciplinary symposium, "Biological and Sociological Research on the Effects of Human Reproduction Control," for the morning of 28 December. The vice-presidential address of Kingsley Davis (University of California, Berkeley) is expected to be one of the papers of this program. The
section may also arrange one or two specialized sessions.

The *American Economic Association* (Bert F. Hoselitz, University of Chicago) will have a program of invited papers, cosponsored by Section K, on "The Economics of Medicine." This is scheduled early in the meeting (26 Dec.) so that AEA members may attend both the AAAS meeting and their own national meeting, to be held in Boston, Mass., from 27 to 29 December.

The *American Political Science Association* (Evron M. Kirkpatrick, APSA), it is anticipated, will have its customary special program (27 Dec.) cosponsored by Section K.

The national meeting of the *American Society of Criminology* (Donal E. J. MacNamara, New York Institute of Criminology), which has as its general theme "Quo Vadis in Criminology?", will open on 29 December with a session on "Experimental programs in crime control and crime prevention" and one on "Analysis and evaluation of delinquency prediction devices." Other sessions (30 Dec.) will be on "Improving the administration of criminal justice" and a "Seminar: university curricula in criminology and corrections." The annual awards and memorial session of the Society will be held on the evening of 29 December; the presentation will be preceded by the annual business meeting.

The *American Sociological Association* (Janice H. Hopper, American Sociological Association, New York) will have two symposia (29 Dec.), cosponsored by Section K.

Details of the programs of the *Metric Association* (Robert P. Fischelis, Washington, D.C.) are not yet available.

**History and Philosophy of Science (L)**

Details of the program of Section L (Norwood Russell Hanson, Indiana University; Adolf Grünbaum, University of Pittsburgh) are incomplete, but there will be five or six sessions in the two areas of interest of its members. In addition to "Philosophical Aspects of Present-day Cosmogony and Cosmology," discussed under *General Sessions*, there will be symposia and papers as follows: "The Relation of Physics to the New Biology"; W. M. Elsasser (Princeton University), "The natural philosophy of automation," "The Analytic-Synthetic Distinction in its Bearing on the Philosophy of Mathe-
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The program of Section M (L. K. Wheelock, Engineers Joint Council) is still in a planning stage.

Medical Sciences (N)

The annual program of Alpha Epsilon Delta (Maurice L. Moore, national secretary) on career opportunities in medicine and dentistry will consist of a luncheon and address and a tour of local medical facilities.

As in previous years, Section N will have a four session symposium (29–30 Dec.) with participants from all parts of the country. This year's subject is chemical suppression of cellular synthesis and mitosis and is being organized by Francis D. Moore (Harvard University) and Oscar Touster (Vanderbilt University). George Hitchings (Burroughs Wellcome Research Laboratory, Tuckahoe, N.Y.), Arnold D. Welch (Yale University), and Rupert E. Billingham (Wistar Institute of Anatomy) are collaborating in the program planning. The papers will deal with the regulation of DNA action, inhibition of nucleic acid production, cancer chemotherapy, and immunosuppression in transplantation. Francis D. Moore will give the vice-presidential address. Sec-

matics"; J. G. Kemeny (Dartmouth College), "Philosophy and Scientific Revolutions"; P. K. Feyerabend (University of California, Berkeley), "A philosophy of revolutionary scientific development," "The Logic of Statistical Explanation"; Wesley C. Salmon (Indiana University), "The status of prior probabilities in statistical explanation," "Philosophical Issues in Economics"; F. Machlup (Princeton University), title to be announced, and G. Tintner (University of Pittsburgh), "Methodological questions of econometrics." The section vice-presidential address will be given by Adolf Grünbaum.

The ninth annual meeting of the Society for General Systems Research (Milton D. Rubin, Mitre Corporation) will have a session for contributed papers and a session for invited papers on "General Systems and the Two Cultures." (27 Dec.).

The plans of the Philosophy of Science Association (Lewis K. Zerby, Michigan State University) are not yet available.

Engineering (M)

The program of Section M (L. K. Wheelock, Engineers Joint Council) is still in a planning stage.
tion N will also cosponsor the AAAS interdisciplinary symposium on developmental aspects of immunity as well as other appropriate programs.

The American Physiological Society and the Bioscience Programs of the Office of Space Sciences of the National Aeronautics and Space Administration will jointly sponsor a symposium on space biology and medicine. Coordinators are Robert E. Smith (UCLA Medical Center), and Orr E. Reynolds (director of Bioscience Programs, NASA).

Details of the annual symposium at the AAAS meeting sponsored by the American Psychiatric Association Committee on Research (Milton Greenblatt, Massachusetts Mental Health Center and Harvard Medical School) are not yet available.

Dentistry (Nd)

Section Nd (Seymour J. Kreshover, National Institute of Dental Research) will have a three-session symposium "Growth and Development of the Face, Teeth, and Jaws," arranged by Stanley M. Garn (Fels Research Institute), 26–27 December. The symposium will be cosponsored by the AAAS section on Anthropology (H), the American Dental Association; the International Association for Dental Research, North American Division; and the American College of Dentists.

The program will cover the determinants of dental and facial growth, including the genetic determinants, endocrine determinants, nutrition determinants, and abnormal determinants of growth and size. An attempt will be made, then, to consider normal variation in the development of the teeth and the supporting structures and the face as a whole. The speakers will represent a broad range of backgrounds being drawn from experimental pathology, radiology, genetics, enzymology, nutrition, and primate research, and in this way it is expected that the growth of the teeth and jaws will be put in broad perspective. Speakers and their papers are: Opening remarks and welcome by Paul E. Boyle (Western Reserve University; vice president of Section Nd) with B. Holly Broadbent (Western Reserve University) presiding; Introduction to the symposium, Stanley M. Garn (Fels Research Institute); "Evolutionary background of dental and facial growth," Albert A. Dahlberg (Zoller Memorial Dental Clinic, Uni-
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versity of Chicago); "Normal variations in dental facial growth," Coenraad F. A. Moorrees (Forysth Dental Infirmary for Children, Boston, Mass.); "Genetic parameters of dental facial growth," Richard Osborne (Sloan-Kettering Institute for Cancer Research). Carl J. Witkop (National Institute of Dental Research) will preside at the second session scheduled for the afternoon of 26 December. Speakers and their papers are: "Prenatal factors and their evaluation," Uwe Stave (Fels Research Institute); "Dental and facial growth in chromosomal abnormalities," M. Michael Cohen (School of Dental Medicine, Tufts University); "Growth of the face in developmental defects," Frederic N. Silverman (Children's Hospital Research Foundation, Cincinnati); "Genetics of tooth formation," Stanley M. Garn and Arthur Lewis (Fels Research Institute). A third session with Seymour J. Kreshover presiding is scheduled for the morning of 27 December. Speakers and papers are: "Endocrine factors in tooth formation," Stanley M. Garn, and Arthur Lewis (Fels Research Institute) and Robert Blizzard (School of Medicine, Johns Hopkins University); "Nutritional modification of dental development," Lawrence R. Fess (School of Public Health, Tulane University); "Genetic carrier of dento-facial disease," Robert J. Gorlin (School of Dentistry, University of Minnesota); "Primate odontogenesis," Daris R. Schwindler (Medical College of South Carolina); Summary and concluding remarks, Stanley M. Garn. A fourth session on another general educational subject will complete the Section's program.

Pharmaceutical Sciences (Np)

The program of Section Np (Joseph P. Buckley, University of Pittsburgh) is expected to include sessions for contributed papers in hospital pharmacy, other sessions for contributed papers, and a symposium. There will be a section luncheon with the vice-presidential address by Don E. Francke (American Society of Hospital Pharmacists) and a dinner.

Section Np's entire program will be cosponsored by the American Association of Colleges of Pharmacy, the American College of Apothecaries, the American Society of Hospital Pharmacists, the American Pharmaceutical Association, Scientific Section, and the National Association of Boards of Pharmacy.

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Agriculture (O)

Section O (A. H. Moseman, Rockefeller Foundation) will have a four-session symposium on "Agricultural Sciences for Newly Developing Nations." The sequence of topics is: (i) Characteristics of agricultural systems in emerging nations; (ii) Research to devise and adapt innovations; (iii) Education and development of human resources; and (iv) Establishing indigenous institutions to serve advancing agriculture. It is hoped that the review of agricultural science in advancing nations will be of broad interest to scientists and educators at the universities, government agencies, and private organizations that have participated in such programs during the past decade or more.

Industrial Science (P)

Section P (Allen T. Bonnell, Drexel Institute) will have its annual symposium of particular interest to executives in industry. Past vice president Henry F. Dever (Minneapolis-Honeywell Regulator Company) will give the vice-presidential address at the annual luncheon. The Section will also confer the 1963 Industrial Award and cosponsor appropriate programs. The program of The Institute of Management Sciences (Burton V. Dean, Case Institute of Technology) is yet to be arranged.

Education (Q)

The program of Section Q (Herbert A. Smith, Pennsylvania State University) includes two joint sessions with the Council for Exceptional Children (26-27 Dec.); two joint sessions with the American Educational Research Association (30 Dec.); three or more sessions for contributed papers (29-30 Dec.); a business meeting (28 Dec.); and the vice-presidential address of Harold E. Wise (University of Nebraska) (29 Dec.). The four science teaching societies—ANSS, NABT, NARST, and NSTA—that regularly meet with the AAAS may be joined by a fifth, the Central Association of Science and Mathematics Teachers (CASM). (The coordinator is Paul Loos, Bedford, Ohio.) There will be a joint session arranged by Ted Andrews (State Teachers College, Emporia, Kansas) (27 Dec.), three joint film sessions (27-29 Dec.) and a series of concurrent sessions similar to the

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Statistics (U)

The program of Section U, Horace W. Norton (University of Illinois), chairman, will again consist largely of sessions prepared or cosponsored with other sections. The vice-presidential address will be given by Harold Hotelling (University of North Carolina); the proposed title is "Light on statistical teaching problems for recent mathematical research."

Sessions are being developed on statistical problems in geology, stochastic models in biology, multivariate methods in experimental psychology, and on problems of search and retrieval systems. Additional sessions are also planned for the presentation of results of recent significant statistical surveys. One on "Health statistics" will draw heavily on the findings of the National Health Survey. The other session will be built around a current study on how graduate students finance their education.

In addition, there will be a session for teachers of statistics and another session on new developments in applying statistics to novel domains of science. Morris B. Ullman, 7604 Cayuga Avenue, Bethesda, Md., is secretary for Section U.

The American Statistical Association will have a number of sessions sponsored jointly with Section U and perhaps others cosponsored by the Biometric Society and by Section K.

The Biometric Society, Eastern North American Region (T. A. Bancroft, Iowa State University of Science and Technology) is planning sessions but details are not yet available.

Science in General (X)

A number of organizations, too general in their interests to be placed in any sectional series or under any specific discipline, will constitute the "X" series in the printed General Program. In this preliminary synopsis, the programs of one of these—the Academic Conference—has already been mentioned, under "Other General Events."

The American Geophysical Union (Waldo Smith, AGU, Washington, D.C.) will cosponsor appropriate sessions.

The national convention of the Scientific Research Society of America (Donald B. Prentice, Yale University) is scheduled for 30 December. The award of the William Procter prize and the annual RESA address will follow the luncheon, to be held jointly with the Society of the Sigma Xi.

The annual meeting of Sigma Delta Epsilon, graduate women's scientific fraternity (Ernestine Thurman, National Institutes of Health) will include a luncheon for all women in science with Agnes Hansen (University of Minnesota) as speaker, and the grand chapter dinner and meeting. A headquarters room will be maintained throughout the meeting period (26–29 Dec.).

The 64th annual convention of the Society of the Sigma Xi (Thomas T. Holme, Society of the Sigma Xi, New Haven) will be held on 30 December after the joint luncheon with RESA. In the evening of 29 December, the Society will join with the United Chapters of Phi Beta Kappa, (Carl Billman, Phi Beta Kappa, Washington, D.C.) in sponsoring an address by Paul B. Sears (Yale University). Since the inauguration of the series in 1922, these distinguished lectures of interest to all participants have been a valued feature of the Association meeting.

Call for Papers by Sections

Five sections of the Association will arrange sessions for contributed papers at the Cleveland meeting. The secretaries or program chairmen to whom titles and abstracts of papers should be sent, not later than 30 September, are as follows:

E-Geology and Geography. Richard H. Mahard, Department of Geology and Geography, Denison University, Granville, Ohio

G-Botanical Sciences. Harriet B. Creighton, Department of Botany and Bacteriology, Wellesley College, Wellesley 81, Mass.


Np-Pharmaceutical Sciences. Joseph P. Buckley, School of Pharmacy, University of Pittsburgh, Pittsburgh, Pa.

Q-Education. Herbert A. Smith, Room 168 Chambers Building, Pennsylvania State University, University Park, Pa.

Although the general deadline is 30 September, most sections, and subsequently the AAAS office, would be happy to receive titles in advance of that date.