situations, called transportation problems, in which one seeks the cost-minimizing pattern for transporting some commodity from several origins (each with a limited supply) to several destinations (each with a fixed requirement); in general, the cost of shipment per unit differs for different origin-destination combinations.

Turning next to the general linear programming problem, the author gives an exceptionally clear account of the basic computational procedure (G. B. Dantzig's *simplex method*), built around a detailed discussion of an illustrative two-variable problem. Here I regret that the algebraic analysis was not more explicitly supplemented by the corresponding geometrical picture: the procedure involves hopping from vertex to adjacent vertex of the multidimensional, convex polyhedron described by the constraints, always in the direction in which the function to be maximized (minimized) is increasing (decreasing). The final topic discussed is duality; in solving a problem by the simplex method, one also automatically solves (by another method) a "dual problem," the data array of which is obtained from that of the original problem by interchanging rows and columns. The relationship between original and dual problem is described in some detail, but the formal proof of the resulting duality theorem is relegated to an appendix which, unfortunately, is marred by typographical errors.

Part 2 deals with the so-called theory of games, that is, with the selection of optimal behavior versus intelligent opponents. Most attention is paid to the classical case in which two players, each with finitely many strategies, have diametrically opposed interests; a *solution* of a game is defined, and it is shown how, in general, solutions do not exist unless probabilistic mixtures of strategies are admitted. The author then describes the reduction of such a game to a linear programming problem and its dual; the existence of a solution (using probabilistic strategy mixtures) is deduced from the duality theorem of part 1 (an independent proof is given in an appendix), and the simplex method can be used to compute the solution. One subsequent section deals with games having infinitely many strategies, another with games in which the players are not directly opposed.

The author has been remarkably successful in giving a lively and accurate treatment of so much material, including several topics not mentioned above, in so few pages. No advanced mathematics is employed, and the book is recommended to all members of the scientific community willing to exert the requisite concentration. The reader should bear in mind, however, that the simple examples chosen for expository purposes give no idea of the multiplicity of real-life situations in which the subject matter has proved of value, or of the degree of complexity of these applications to realistic problems.

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A Bibliographical Checklist and Index to the Published Writings of Albert Einstein. Compiled by Nell Boni, Monique Russ, and Dan H. Laurence. Pageant Books, Paterson, N.J., 1960. 84 pp. $6.

This check list is divided into three parts: scientific writings, general writings, and selected interviews. Within each of the parts the material is arranged chronologically, the order being determined by the year and month of the first publication regardless of the language in which the specific work was first published. Revised or translated texts are attached by subnumbers to the original publication, regardless of when later publication occurred.

In preparing the bibliography the compilers consulted the following works: *Albert Einstein: Philosopher-Scientist* (1949; ed. 2, 1951) edited by Paul A. Schilpp and the Einstein bibliography (1937) by E. Weil. This material has been augmented and revised; 607 items are listed.

Convention Decisions and Voting Records. Richard C. Bain, Brookings Institution, Washington, D.C., 1960. xi + 327 pp. Appendixes.

This is a companion volume to *The Politics of National Party Conventions* (Brookings Institution, 1960). It seeks to supplement that study of the presidential nominating process by providing an account of the convention proceedings of the two major parties since 1832 and a record of important convention votes. Each convention is introduced with a brief description of the political situation existing at that time in the United States.

Medical Helminthology. John M. Watson. Baillière, Tindall and Cox, London; Williams and Wilkins, Baltimore, Md., 1960. viii + 487 pp. Illus. $15.50.

As we become increasingly aware of, and concerned with, world-wide problems of human health we will inevitably pay increasing attention to the worms as causes of human debilitation, suffering, and death. A large proportion of the world's population is infected with one or more parasitic worms, and many millions of people suffer as a result. The penalty for the losses suffered falls upon all of us.

It is Watson's intention to present, relatively briefly, essential and up-to-date information about the worm parasites of man, to point out their importance to man's health, and to call attention to gaps in our knowledge about them. There has been a need for such a book, and this book meets the challenge.

About one half of the text deals very effectively with such basic things as the nature of parasitism; life cycle patterns; parasite physiology, ecology, and transmission; resistance and immunity to infections; diagnosis, prevention, and treatment of parasite infections; pathogenesis of infection; and so forth. In these sections the author succeeds in achieving brevity without falling into a recital of dry generalities. Important and pertinent examples are usually cited to illustrate his points.

The remainder of the book treats the worms according to taxonomic groups. The morphology and organ systems of each group are described, the larger taxonomic groups are characterized, and then individual species are dealt with. Usually only a few pages could be devoted to a single parasite—for example, 8 pages are devoted to *Ascaris*—but this is sufficient to present a surprisingly large amount of carefully selected information. All the illustrations are comparatively simple line drawings, stressing salient points of anatomy and important stages in the life history. Recognition characters and comparisons of related species are emphasized. Some readers may find these drawings crude and somewhat inadequate.

This book is written in an admirably clear and unpretentious style which is in refreshing contrast to some of the other texts on the subject. There are very few references to literature, but a text of this sort needs none. The

appendix includes a list of general references, mostly texts and monographs.

This book will probably be most useful to students of medical helminthology and should serve admirably as a text for this subject. It will also serve as a guide for physicians who occasionally encounter patients with worm infections.

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Aquatic Phycomycetes. Frederick K. Sparrow, Jr. University of Michigan Press, Ann Arbor, ed. 2, 1960. xxv + 1187 pp. Illus. $22.50.

With the possible exception of a few specialists in the limited field involved, mycologists and others interested will be surprised to find that the subject of aquatic Phycomycetes requires a volume of over 1100 pages for adequate presentation. Equally interesting is the fact that the present edition represents a 50 percent increase in size over the first edition (1943) which at that time was considered to be "a notable achievement."

Aquatic fungi belong largely to the class Phycomycetes, the most primitive of the Eumycetes, or true fungi, although each of the other fungus classes does contain some species which are aquatic or which live on aquatic substrata.

This standard work brings together information available through 1 January 1955 on all phycomycetous fungi occurring in fresh or marine waters. It does not include most of the Peronosporales (downy mildews) or the Entomophthorales, which develop on strictly terrestrial hosts or substrates. These latter fungi have been adequately treated in other monographs. The author has added to this edition those species of *Pythium* and *Phytophthora* known to occur as water molds, the genera of the Saprolegniaceae, and citations of new species in the family published since Coker and Mathew's monograph (1937). Also included are all new taxa in the other pertinent groups which have been described since the publication of the first edition. Literature references appearing subsequent to the date limit (1955) have been included in the bibliography. Similarly, new taxa and the results of recent investigations have been noted in footnotes or added at appropriate points under the heading "Recently described taxa." The total number of taxa involved is impressive—8 orders, 24 families, 152 genera, and 781 species—in contrast to the number that are given in the first edition—7, 21, 112, and 475, respectively.

The original plan of presentation has not been materially changed in the present work. A comprehensive introduction considers general phases of the subject including phylogeny and the relationships of the several groups, geographic distribution, hydrobiological aspects, methods of isolating and culturing the fungi as well as their preservation in permanent collections, and finally a key to the orders. In the consideration of the orders, attention is given to morphology, methods of development, reproduction, cytology, and parasitism. A detailed systematic account of each family, genus, and species is given with keys for each family and genus. There are technical descriptions of each taxon with notes on substrates, collectors, distribution, literature references, and critical comments on taxonomic points.

Hidden away in the text are two new genera and a considerable number of new species and new combinations, all properly set up to conform to the International Code of Botanical Nomenclature. Listing these changes on a single page would have been very helpful to those concerned with the nomenclatorial aspects of the subject.

A carefully prepared list of substrata is provided following a systematic arrangement of the plant and animal hosts or organic substances involved. A bibliography of over 1200 entries, practically all of which the author has reviewed, points up the large number of workers in many countries who have contributed to the general subject. A general index to technical names concludes the book.

In this compendium the author has presented a complete and well-rounded account of the subject of aquatic fungi. It is an authoritative and scholarly work, and one which all who are in any way concerned with these fungi will need to have at hand at all times for ready reference.

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Miscellaneous Publications

(Inquiries concerning these publications should be addressed, not to Science, *but to the publisher or agency sponsoring the publication.)*

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