Book Reviews

Aetiologie und Prophylaxe des Lungenkrebses als ein Problem der Gewerbehygiene und des Tabakrauches. Fritz Lickint. Steinkopff, Dresden, 1953. 212 pp. Illus. (Beiträge zur Krebsforschung ed. 2.)

This book closes with a plea for criticisms and suggestions from those interested in lung cancer, emphasizing the desirability "for objectivity in order to help the cause, rather than to do damage." Nevertheless, Lickint has written a very subjective and even passionate book, culminating in the statement that "there can be no doubt that the most promising preventive measures for cancer of the lung may be expected in the field of tobacco consumption."

In spite of Lickint's biased attitude, this book may be useful to those working in the etiology of cancer of the lung because it offers a wealth of bibliographic material not usually considered in American studies. There are some 1500 references, the majority to European sources, with a fair coverage of the Anglo-Saxon literature.

The book is divided into three main chapters: a general one dealing with statistical, ethnological, and geographic medical considerations; a "special" portion considering the etiology, which is divided into sections of infectious diseases, chemical causes, physical causes, and tobacco as a cause of lung cancer; and a final chapter dealing with prevention of cancer.

The critical reader will discard many of the arguments that tend to minimize all possible etiologic factors except tobacco. Lickint complains bitterly about the "nonsensical objections and entirely unproven assumptions" which form an "underbrush rendering further work so difficult," but he does not hesitate simply to overlook such facts as may be contrary to his preconceived idea that tobacco, particularly cigarettes, definitely causes lung cancer. In the general discussion of carcinogenesis there are some critical omissions, such as the failure to consider Sugiura's studies on carcinogenic oil derivatives, Berenblum's work on cocarcinogens, and even Potts' classical observations on soot in chimney sweeps.

The fact that Norway and Cuba are exceptions to the rule that cancer of the lung occurs with higher incidence in men than in women is simply explained away. Many inaccurate and confused statements, although not representative of the book as a whole, reflect the poor quality of its scholarship.

Nevertheless, as a source of material, particularly for the older foreign work on the subject of cancer of the lung, this book has value. It relates the interesting geographic medical observations that in Russia cancer of the lung increased in frequency even before 1900, and that in recent years it has no longer increased in the Soviet Union. It provides equally interesting observations on the epidemiology of lung cancer in Turkey before and after the introduction of cigarettes into that country.

In the chapter on experimental production of cancer with tobacco products there is a wealth of older material, largely listed without critical evaluation. Nevertheless it is presented, whereas there is a tendency in the newer American literature to omit this older material altogether.

One wonders why the furore about cigarettes and cancer has started only recently when, as appears from Lickint's book, so much information on the subject has long been available, and when alarming rises in cancer of the lung have taken place for as long a period of time as seems to have been the case.

This book, with all its shortcomings, can be helpful in providing the background information for many who are interested in studying the lung cancer problem. Because of its speculative and biased reasoning, however, it does little to clarify the question of the etiology of lung cancer. It merely obscures the issues still further with a dense screen of cigarette smoke.

The geographic location of the author may have made it wise for him to close with a quotation from I. P. Pavlov; but there is irony in his doing so because his book reads like the reaction of one who has developed a conditioned reflex against anything connected with tobacco.

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Information Theory. Stanford Goldman, Prentice-Hall, New York, 1953. 385 pp. Illus. $9.

The growing importance and vitality of information theory is amply witnessed by the appearance of this graduate-level engineering textbook. Its nine chapters begin with a chapter on information theory of discrete (spelled "discreet" throughout) systems, followed by three chapters on properties of continuous signals, ergodic ensembles and random noise, and the entropy of continuous distributions, which lay the groundwork for the next chapter on transmission of information in band-limited systems having a continuous range of values. After a short chapter on "signal space," introducing some elementary but useful concepts from the geometry of spaces of n dimensions, there are two chapters on information theoretical aspects of modulation and noise reduction and on linear correlation, filtering, and prediction. The final chapter, on divers aspects of information, is on an almost popular level. Thirteen appendixes, 11 devoted to various mathematical developments, one to solutions of some of the book's numerous problems, and one to a table of logarithms to the base 2, conclude the book.

The mathematical level should not be difficult for the average first-year graduate engineering student. Some familiarity with complex variables and Fourier methods is assumed, but the rudiments of prob-