incriminating other metabolic products, however well
described, now becomes irrelevant.

The author, who is the Medical Officer of the Clayton
Aniline Company and Ciba Clayton, Ltd., has much
experience with the clinical side of the problem on which
his views seem sound and authoritative.

It is interesting to learn that the first sign of intoxica-
tion by aromatic amines is often euphoria; that methae-
moglobinemia due to acute exposure is readily cleared
up by intravenous injections of methylene blue, and that
cytodiagnostics is the preferential diagnostic and screening
method for bladder cancer (though it fails in cases of
recurrent tumours), the prognosis for which is always bad.

Much space, including photographs, is given to
illustrate how the replacement of manual methods by
automatic machines in modern factories can reduce the
exposure of workers to dangerous chemicals. The author
is alive to the fact that reduction of massive exposure
producing acute intoxication does not eliminate the
danger of tumours which may follow occasional exposures
to even small amounts of carcinogens. In view of the long
latent period (10 to 20 years) between exposure and the
onset of bladder cancer, the preventive measures adopted
in modern factories can, as yet, not be evaluated.

The only safe way to prevent tumours in workers in
industry is to introduce chemical processes which do not
include handling of carcinogenic materials. The replace-
ment of beta-naphthylamine by beta-naphthol and
subsequent amination (p. 63) is an example of what can be
done in this field in the manufacture of dyestuffs. In
the meantime, the author rightly advocates the employment
of workers over 40 years of age and as few as possible on
jobs in which there is a risk of exposure to carcinogenic
amines. This sound principle should be followed in all
industries dealing with carcinogenic materials, whatever
their type.

The book is well produced and only a few printing
errors were noted. The name of Natanson is mis-spelled
in the text. Some judicious pruning would have made
easier reading of this monograph on bladder cancer,
which should be of value to industrial administrators
and medical officers.

R. SCHOENTAL

xxi + 154; 40 figures + 6 tables. $5.00; 40s.) Chicago

This short book is based on a series of lectures given
by the author at the University of Chicago toward the end
of 1961. It sets out to discuss the biological principles on
which radiation protection is based.

The first chapter entitled Radiation and the Facts of
Life deals fairly shortly with the effects of radiation on
cells. Refreshingly, the reader is not taken through
atomic structure and cell division, but the advances
resulting from recent developments in chromosome
cytology are clearly explained. Chapter 2 is called Cancer,
Leukemia, and Longevity. The fact that the natural
ageing processes are considered first is typical of this book,
wherein radiobiological processes are considered not in a
narrow context but against the wide background of
biological processes as a whole. This approach greatly
adds to the interest of the book. The final chapter is an
account of current knowledge of the metabolism of
strontium 90, but no attempt is made to translate the
findings into the possibility of any radiotoxic effects.

A book published under these circumstances is likely
to have a very short useful life unless it is to be kept under
constant revision. For an industrial medical officer pre-
pared to read and ponder over it, this book will provide
source material on which he can base his advice to
persons concerned with radiation hazards. He will not
find ready-made answers, but he will get an insight into
some of the biological complexities of these problems and
incidentally may be introduced to advances in our know-
ledge of many physiological and pathological processes.
All this is presented in a readable way, interspersed with
the whimsical comments one would anticipate from the
title page.

W. R. LEE

Sociology in Medicine. By M. W. Susser and W.
Watson. (Pp. x + 337. 42s.) London: Oxford Univer-
sity Press. 1962.

This work is an interesting combination of the ideas of
an epidemiologist and a social anthropologist. It is
essentially theoretical and academic in approach. The
material is in two parts: the first five chapters discuss the
significance of demographic studies, the effects of social
and cultural environments on individuals and groups, and
the medical significance of the division of industrial
society into social classes. The second part, of four
chapters, concentrates on the contemporary family in
Great Britain from infancy to "the phase of replacement".

The importance of the personal and social environment
in the problems of individual patients is emphasized.
Although the book is modestly described as an intro-
duction to the subject, it summarizes a great deal of
published material in a very readable form. An extensive
bibliography and a good index are provided.

It is important in a work of this kind that there should
be a sound underlying philosophy and some of the refer-
ces quoted are of little illustrative value and might
perhaps have been omitted. Thus in the section on
Medical Bureaucracies two single separate cases are
quoted on page 166; single cases do not always form
good illustrations of a principle, and both of these are
somewhat unsympathetic to the idea of medical bureau-
cracy. Some sections of the book are written very
sympathetically, others less so, which makes the whole a
little unbalanced in approach.

On page 34 appears the surprising sentence, "The
doctor (in industry) is bound to accommodate his profes-
sional values, his concept of health, and his criteria of
what constitutes illness, to . . . social pressures and the
demands of his employers". It is to be hoped that this
achronistic idea will be removed from the next edition.

Apart from these few criticisms, the authors are to be
congratulated on having compressed so much of a
rather vague and diffuse subject into this compact and
readable book. There is good reading for all doctors who
would like to keep their sociology up to date, and
interesting comments, something to learn, and some-
BOOK REVIEWS

thing to disagree with on every aspect of social medicine from adolescence to witchcraft.

L. G. NORMAN


The glycols are the bivalent alcohols with the general formula $C_nH_{2n+2}(OH)_2$ and all readily polymerize. They readily form ethers, esters, and acetates and are thus very numerous, and their mixture is legion. Their toxicity varies much with their volatility. In adequate dosage most of these products may injure the liver and the kidneys. Some of them appear to form oxalates in the body, and cases of poisoning are known in which oxalate stones formed in the urinary tract.

Ethylene glycol is used as a substitute for glycerine or with it in the manufacture of electrical condensers. Ethylene chlorhydrate is used to accelerate the germination of seeds and in the manufacture of drugs such as novocaine. Another product in this group, ethylene oxide, is an intermediate in the manufacture of many organic products, including solvents, and as an additive in detergents.

In many of the industries in which these compounds are used the processes are complicated and intricate so that great care is needed to avoid accidents.

The nitroglycerine products are used as explosives and mixed with an earthy absorbent form dynamite. The speed of combustion of these materials is related to the proportion of inert base in use and to the state of division.

In manufacture the nitration of the glycerine must be carried out with extreme care. The vapour is toxic so that ventilation or even the use of masks with piped air direct to the workman may be desirable.

Acute psychoses or chronic mental changes may follow exposure. Various chronic symptoms affecting the digestive and respiratory tracts may be encountered.

G. C. PETHER


These lectures, according to the editor, have been conceived in order to “advance the newer knowledge of chemical medicine in the cause of clinical practice”. The choice of Dr. Badger for this purpose could hardly have been bettered. He has succeeded in condensing a vast amount of data into 60 small pages of this monograph and in presenting them clearly and simply so that they can be understood by non-specialists. He describes in two chapters the historical background of the discovery of carcinogenic aromatic hydrocarbons, their mode of action, and the hazards of their presence in human environment; one chapter each is devoted to aromatic amines, azo-compounds, miscellaneous chemical car-


This is the authorized textbook of the St. John Ambulance Association, but its usefulness seems likely to extend beyond the purposes of that association since it provides a good introduction for all (not excluding medical students) who have an interest in the subjects with which it deals. The whole range is covered briefly but adequately. There are clear diagrams and well chosen illustrations. The claim is made, and we think that it is substantiated, that the book will help readers to think about the subject for themselves. Emphasis is placed on the need for education of the public in health matters, both for its immediate results and also as an aid in securing support for necessary reforms. The contents of this book should prove to be what its author claims that it is, “a guide to wise living and a healthy way of life”. It should be of great help in giving instruction to those working in industry.

J. A. STRUTHERS


During the period from May 1956 to October 1958, compressed air work in caissons was used for the founding of the six piers by which the Auckland Harbour Bridge is supported. This report gives in considerable detail a description and an analysis of the compressed air illness that resulted. It is a very valuable addition to the literature on compressed air work, since it displays not only a great deal of the raw statistical data but also extensive and sensible analyses of those data.