Book Reviews

Consumer's Guide to a Social Problem

Licit and Illicit Drugs. The Consumers Union Report on Narcotics, Stimulants, Depressants, Inhalants, Hallucinogens, and Marijuana—Including Caffeine, Nicotine, and Alcohol. EDWARD M. BRECHER and the Editors of Consumer Reports. Little Brown, Boston, 1972. xvi, 625 pp., illus. $12.50.

What was to be a "modest handbook" on illicit drugs when begun in 1969 developed into this impressive compendium before the collection of new data for it ceased in January 1972. Brecher and the editors of *Consumer Reports* fortunately resisted the temptation to bring out yet another "slim volume" oversimplifying the facts and issues of drug dependence. A multitude of briefer books have recently attempted to characterize the drug scene and have failed. Brecher and his staff have produced a long but very readable book that is a most comprehensive and informative treatment of the subject.

Most of the popular psychoactive drugs are discussed, including alcohol, nicotine, and caffeine. The inclusion of these so-called licit drugs gives the reader, particularly the nonspecialist, a sense of perspective and a view of the true drug scene unavailable in any other recent publication. To the concerned parent, the contrasts between the licit and the illicit drugs should be both good news and bad news, the good news being that if our children and our culture and our bodies can survive compounds as toxic as alcohol and tobacco, we probably should not fear the more exotic and less commonly used psychoactive drugs. The bad news is clearly described by Brecher when he reviews the physical and behavioral effects of alcohol and tobacco.

One of the book's best and strongest points is that it offers a historical perspective for each drug. The various changes in laws, social attitudes, and policies concerned with the use, or attempts at suppression of use, of each drug are given more emphasis than is basic pharmacology. As the history of drug use patterns is reviewed, it becomes quite apparent that the terms "licit" and "illicit," when applied to drug use, are very arbitrary and have very little to do with the pharmacology or toxicology of the particular compound.

The historical reviews for each class of drugs are all good, but the history of opiate use is perhaps the best and the most complete. For those who believe that the addict will inevitably become an emaciated, disease-wracked, sleepy derelict, the fascinating story of Dr. William Halsted will be of interest. After kicking his cocaine habit by switching to morphine, he went on to become the "father of modern surgery," to help found Johns Hopkins Medical School, and to die at the age of 70 having been in good health and active to the end—all the while taking up to 180 milligrams of morphine daily. One might speculate on the ultimate benefits to society (and to Halsted) had his addictions been managed in a less humane and tolerant way, for example, by depriving him of the privilege of practicing medicine and teaching, or by putting him in prison for a few years. Brecher does an excellent job, with the opiates and the other drugs, of describing the complex interplay between pharmacology, law, sociology, and culture, as determinants of the outcome of drug use. Anyone who hopes for a simple and concise explanation of why people use drugs and what the possible results of drug use are won't find it in this book—or in the real world.

Another point that is well made throughout the volume relates to the growing importance of the news media and covert "advertising" as determinants of drug use patterns, particularly in recent years. Brecher reviews evidence suggesting that the glue sniffing craze of the mid-1960's and many of the phenomena of the LSD era may well have been more a creation of the media than a consequence of changes in individual psychopathology.

Most of the weaker sections of the book reflect the complexities of the issues and the magnitude of the task undertaken by the authors rather than any oversights on their part. For example, the pharmacology of the nonopiates is not gone into in great detail. The chapter on cannabis is a bit dated; unfortunately, most of the new information on cannabis derived from better-designed research only began to be published about the time the authors stopped collecting data. Throughout the book, heavy use is made of anecdotal material, popular articles, and scientific reports from nonrefereed journals, along with more carefully evaluated published reports. But all the sources are comprehensively referenced, so the careful reader can make his own decision about the quality of data.

The conclusions and the Consumers Union recommendations for changes in social policy are presented in the 18-page final section of the book. Not everyone will be satisfied with them. Brecher and Consumers Union suggest that many of the current problems associated with illicit drug use will be solved by making most psychoactive drugs licit or at least making them more readily available to the potential user than they are now, and that problems that might arise from the licit drug use could perhaps be kept in check by education efforts, bans on advertising, and other attempts to deglamorize drug use. The policy issues and recommendations are presented without much discussion of the complicated long-term consequences and social costs of some of the recommendations. If enacted, many of the proposed changes would make for less "criminalization and alienation of young people," but they would also lead greater numbers of people to use drugs. Control of availability obviously doesn't deter all potential drug users, but it does deter many of them. The fact that certain drugs are illegal or not readily available is often cited by nonusers as the reason for their nonuse. Many possible consequences of more extensive drug use could be cited. For example, as marijuana use is made easier and increases in amount, the numbers of traffic deaths associated with drug intoxication will also increase. In terms of cost-benefit accounting, is less "crim-

inalization" and less injury to the victims of law enforcement worth the price (to society and to the victims) of more drug-related traffic deaths and injuries? Consumers Union usually does a good job of presenting a cost-versus-benefit analysis when advising consumers on buying automobiles or frozen chicken dinners. When presenting its recommendations for solving the "drug problem" it offers a less satisfactory accounting. Would the costs of providing adequate treatment facilities for the increased numbers of victims of drug use and the social and economic maintenance for them compare favorably with the benefits of moderate drug use which a larger number of people would enjoy under the Consumers Union plan? Would the recommended new laws "legalizing the cultivation, processing and orderly marketing of marijuana" cause as many but different problems as now exist under the current policy? There is much in the book to indicate that Brecher and Consumers Union are aware of the error of thinking that any single measure such as a change in the law will be a panacea for the marijuana problem or any of the other drug problems. They do recommend that the tax proceeds from the marijuana sales be devoted to "drug research, drug education, and other measures specifically designed to minimize the damage done by alcohol, nicotine, marijuana, heroin and other drugs." It is unfortunate that they did not make explicit in the recommendations section the possible hidden costs of their suggested changes, and estimates of likelihood of success.

In judging the value of this book, however, it would be a mistake to focus on the relatively brief set of conclusions and recommendations. The preceding 531 pages provide an informed, dispassionate, and readable account of the history, sociology, and pharmacology of a group of drugs not usually discussed in one volume. It is a book that could be profitably read by everyone, scientist or not, since we all are affected by the drugs discussed. Most of us are or have been users of at least some of them. Brecher is a skillful writer and a good reporter. The paperbound edition to be published in September at $3.95 will be the bargain of the year.

REESE T. JONES

Department of Psychiatry,
University of California,
San Francisco Medical Center,
San Francisco

Stubbe's Kurze Geschichte

History of Genetics. From Prehistoric Times to the Rediscovery of Mendel's Laws. HANS STUBBE. Translated from the second German edition (Jena, 1965) by T. R. W. Waters. M.I.T. Press, Cambridge, Mass., 1973. xii, 356 pp., illus. $14.95.

Since its original publication in 1963 Stubbe's *Kurze Geschichte der Genetik* has been useful to specialists in the history of genetics. It contained a substantial amount of information on studies of mutations, variations, and cytology between 1859 and the "rediscovery" of Mendel in 1900 which was not to be found in H. F. Roberts's older yet still valuable *Plant Hybridization before Mendel* (reprinted by Hafner, 1965), and in its chronological sweep it dovetailed nicely with L. C. Dunn's *A Short History of Genetics* (McGraw-Hill, 1965). Now T. R. W. Waters has made Stubbe's story and wealth of historical material accessible to a wider audience.

The author commits a little over a third of the text to a recounting of pre-19th-century theories of heredity. This proportion is entirely appropriate. These chapters, however, are uneven; they vary in degree of analysis, and they suffer the usual fate of surveys which must cover 2000 years in a few leaps. Stubbe includes an informative account of the work and theories of heredity of Aristotle, the Hippocratics, Maupertuis, Linnaeus, and Kölreuter, but he gives short shrift to St. Augustine, Harvey, Bonnet, and Spallanzani. He makes no effort to relate 16th- and 17th-century ideas about heredity to the Scientific Revolution; he avoids coming to grips with *emboîtement*—that bugbear of many whiggishly inclined historians of biology—and he fails to place the preformation-epigenesis debate of the 18th century within the appropriate context of a mechanical philosophy and a deistic faith. These chapters fall far short not only in detail but in historical sophistication of Jacques Roger's *Les Sciences de la vie dans la pensée française du XVIII^e siècle* (Colin, 1963). This work was, of course, not available to Stubbe for his first edition, but ten years later he still appears to be unaware of the reorientation which Roger has given to the history of 16th- through 18th-century theories of generation.

The remaining two-thirds of the text concentrates appropriately enough on the 19th century; here Stubbe covers a number of subjects in depth and with real understanding. In the lengthiest of these five chapters he examines the plant hybridizers from T. A. Knight to W. O. Focke and skillfully contrasts Mendel's experiments with those of his contemporaries. Here Stubbe is clearly abreast of some of the most recent historical studies on Mendel, those of Weiling, Orel, Gaisinovich, and Olby. Since much of this historical sleuthing is unfamiliar to Anglo-American circles, its inclusion is of real service. Subchapters on Darwin's theory of pangenesis, Galton's views on congenital malformations, and Haeckel's theory of perigenesis give unusual breadth to this chapter.

The chapter ". . . on sudden variations . . ." is perhaps the most interesting of all. Stubbe's own genetic research has focused on gene mutations. In his capacity as professor at the University of Halle and as director of the Institut für Kulturpflanzenforschung der Deutschen Akademie der Wissenschaft he critically examined Lysenkoist claims. His *Genmutation: I, Allgemeiner Teil* (*Handbuch der Vererbungswissenschaft*, vol. 2; Borntraeger, 1938) put him in the position to review 19th-century knowledge of sport variations; much of this research is carried over into his *History of Genetics*. For 25 pages, in fact, Stubbe parades forth observations on mutations and sudden variations in man, animals, and plants made from Darwin's time to the turn of the century. At this point the author forgets to keep his historical story in view, but by the end of the recitation an attentive reader will be convinced that de Vries's mutation theory provided an alluring and wholly plausible explanation for genetic change and the evolution of species.

In a parallel chapter Stubbe then traces developments in cytology concurrent with the above-mentioned observations on mutations. This chapter has been expanded since the first edition, but the outline and message remain the same: that the microscopical revelations about cell multiplication and nuclear division of the 1870's, '80's, and '90's prepared biologists for the rediscovery of Mendel's work and the establishment of classical genetics. In the final two chapters Stubbe examines the segregation principle suggested in a limited context by Haacke, von Guaita, and others and given generality and a statistical foundation by de Vries, Correns, and Tschermak. These three co-discoverers of Mendel's work, as did Mendel earlier, envisioned a segregation of germinal material to account