Warnings

Read the Label. Reducing Risk by Providing Information. SUSAN G. HADDEN. Published in cooperation with the American Association for the Advancement of Science by Westview, Boulder, CO, 1986. xviii, 275 pp., illus. $27.50.

Though self-interest in the form of desire for steady sales provides an incentive for purveyors of dangerous products to present them in safe forms or with instructions concerning proper use, the market provides only a porous defense against the extremes of ignorance and greed. Hence, government responds to political demands by imposing restrictions in the case of products that pose truly significant hazards. But governmental prohibitions and prescriptions, often enacted in emotional reaction to real or imagined catastrophes, frequently sweep too broadly, imposing unnecessary and costly restrictions on the safe as well as appropriate restrictions on the unsafe. Consequently, as Susan Hadden explains in her informative book, American government often has adopted a less intrusive regulatory strategy. Rather than flatly prohibiting substances or uses, the law directs producers to furnish risk-related information through standardized descriptions and warning labels so that consumers can make their own risk assessments based on their particular circumstances and skills and can strike their own tradeoffs between risk and utility or expense. Cigarette manufacturers are instructed to remind consumers, on each package, that the contents pose a significant hazard, and, for smokers who wish to pick the level of their poison, to recite the brand's tar and nicotine content. Instead of mandating fixed quality standards for used cars, the Wisconsin legislature requires used-car dealers to disclose, on a prescribed form, defects in each vehicle's brakes, lights, and other systems.

The big question raised and discussed in *Read the Label* is how well mandatory label disclosures and warnings work. Given the well-known difficulties most people have in paying attention to and comprehending information about remote hazards, in what circumstances are information-providing strategies adequate? Or, given the scientific uncertainties surrounding the risks posed by many substances under varied conditions of use, can mandatory warnings be designed that avoid oversimplification that makes them meaningless (or excessively frightening) without being so detailed that they are ignored or misunderstood? (A Minnesota bank reportedly sent to 115,000 customers a federally required 4500-word booklet about its electronic funds transfer services; inserted in its midst was an offer of $10 to any customer who would write "Regulation E" on a postcard and send it in. No one did.)

Read the Label does not resolve all these difficult questions, but it does provide a valuable overview and analysis of current federal mandatory disclosure programs. Successive chapters present concise but comprehensive histories of federal regulation of drugs, consumer products, occupational risks, food products, and pesticides. In each, Hadden carefully describes the interplay between outright prohibition (for example, a ban on the use of the pesticide endrin in cotton fields east of Interstate 35), prescription of safety standards (for example, limitation of its use to state-certified professional applicators), and mandatory labeling (the "label" specifying appropriate use of endrin is a booklet whose content was negotiated between the manufacturer and EPA over a period of three years).

Hadden concludes that because of the fragmented way in which regulatory policy is made, the current "system" for labeling requirements is "internally inconsistent, dominated by attention to short-term hazards, and poor in providing risk information." Warnings, she feels, sometimes are used when stricter regulatory controls would be better. Labels rarely set forth the frequency of damage (as opposed to the existence of a hazard) or the potential severity of the consequences; the lack of such information limits consumers' ability to make rational choices about whether to run the risks involved.

It is not clear, however, just how important these defects are. Probably because little research has been done on the question, *Read the Label* is disappointingly thin in data about the actual effects of mandatory disclosure programs. Hadden is able to cite few studies describing the impact of specific disclosure programs on consumer behavior, manufacturing practices, or injury and illness rates. She does note survey evidence that most consumers do not really understand the vitamin-content information on food packages and that physicians and pharmacists fail to give most patients precautionary instructions concerning prescribed drugs. But Hadden's exposition of these and other "failures" and "confusions" is not rooted in data showing that they have serious consequences.

Assessing the importance of "weaknesses" in our labeling systems is a difficult matter. For example, notwithstanding gaps in labeling regulations, to what extent does contemporary liability law, with its threat of huge damage judgments, serve to induce manufacturers of dangerous products to provide appropriate warnings and safeguards? And how perfect must warning systems be in order to have an impact? The Wisconsin used-car disclosure law, according to one study, induced many dealers to inspect for and repair defects even though buyers often didn't read the disclosure statement. Why? Because even if disclosures affect only a minority of consumers, sellers sensitive to marginal losses in market share may feel compelled to reduce the riskiness of their offerings. But how substantial must that attentive minority be? Finally, the testing, measuring, and checking entailed in implementing increasingly sophisticated labeling programs is far from costless; hence we need to predict whether the added costs of reducing "weaknesses" in disclosure systems actually will produce commensurate gains in public health.

Hadden is probably on the right track in pressing for improvements in our methods for communicating what consumers and workers really need to know about the substances they encounter. More research on the effects of disclosure programs would help that project along a great deal.

ROBERT A. KAGAN
Department of Political Science, University of California, Berkeley, CA 94720

Neurochemistry

Chemical Neurobiology. An Introduction to Neurochemistry. H. F. BRADFORD. Freeman, New York, 1986. xvi, 507 pp., illus. $36.95.

For more than a hundred years biochemists have been grinding up brains and analyzing their chemical components. Following the lead of Johann Thudichum, the "father of neurochemistry," whose pioneering labors in Victorian London generated an impressive catalog of substances extracted with organic solvents from masses of brain tissue, neurochemists have exhaustively documented the biochemical properties of nervous tissue. They have explored its chemical composition, traced the metabolic relationships among its constituents, elucidated its bioenergetics, and probed the membranes that are essential for its functions. Like the traditional disciplines of neuroanatomy, neurophysiology, neuropharmacology, and