

the book case

lunar orbit—an approach that the President's Science Advisory Committee, even at the outset, described as a "technological dead end." And so we reached the moon in a special-purpose stunt machine, and then quit.

The federal program to open the space frontier collapsed, and the Apollo hardware was soon scrapped. Today, as NASA begs subsidies for its costly Space Shuttle and begins to beat the drums for a stunt-flight to Mars, space advocates would do well to remember this history.

The chief virtue of McDougall's book is that it places technology—the most

dynamic force of the modern world—at the center of the historical stage. As we approach a time when computer-aided engineering will floor the accelerator of technological progress, the relationship among liberty, politics, and technology must become a central concern. *The Heavens and the Earth* holds few answers, but it can help us shape better questions.

K. Eric Drexler is a research affiliate at the Massachusetts Institute of Technology and a director of the L-5 Society. His book on technology and the future, Engines of Creation, will be published this spring.

philosophy leads to a sense of fatalism... If 90 percent of cancers are caused by the environment, why should we bother" to quit smoking or change our diets?

Whelan never claims that there is no danger in chemical contamination of our environment. But we cannot rely on "layman's epidemiology"—the axiom that if someone exposed to a chemical (at any level) gets sick, the chemical caused the illness, and its corollary that exposure to any synthetic chemical or man-made pollutant is potentially lethal—to guide us in weighing the benefits and hazards of chemicals.

Last year, the federal Environmental Protection Agency banned the use of the preservative-pesticide EDB (ethylene dibromide) on fruits and grains, after media reports of minute traces of the substance in treated grains, citrus fruits, and other foods. EDB has been found to be a carcinogen in long-term, high-dose tests on rats and mice. The EPA estimates that the average consumer takes in, on a body-weight basis, less than a quarter-millionth EDB as much as the rats' test doses; to get a dose equivalent to the test dose, you would have to eat about 800,000 pounds of food a day—for life.

As Whelan says, "Such an immense difference in the doses... is in itself enough to justify skepticism about... the hazard faced by consumers." In addition, workers who have been occupationally exposed to EDB for up to 16 years or more have shown a cancer incidence "not significantly different from that expected in an unexposed population."

Yet the EPA—and hence the media and environmental organizations—maintained for months last year that continued use of EDB would cause three extra cases of cancer per thousand people. Then, just before the ban took effect, the EPA found that its estimate was at least 14 times too high. This information was inexplicably withheld until after the ban had passed.

Okay. Even if the cancer risk is much lower than the figure the EPA originally maintained, shouldn't we eliminate that risk anyway? "Let's ban EDB just in case," is the typical reaction. "We have nothing to lose."

But we do. The alternatives to EDB are much more dangerous than EDB itself. EDB wasn't used because farmers and food makers like to make people eat poisons. EDB protected growing and stored foods against insects, which are hazardous in themselves and also spread and facilitate the growth of toxins.

The Causes of Cancer: A Poisoned Discussion

By David M. Stewart

Toxic Terror: Exploding the Myths of the Environmental Fanatics, by Elizabeth M. Whelan, Ottawa, Ill.: Jameson Books, 292 pp., \$16.95

Is America poisoned? When a glib environmentalist or an aerobically fit actress tells a mid-morning TV audience that 80 to 90 percent of cancers in the United States are "caused by our environment," the audience "knows" what it means. So do students who hear the same thing from their teachers and from social studies "learning materials." They mean, and many Americans have come to believe, that man's mastery of nature has devolved into an assault on man's health. Especially in the United States, technology is turning our environment into a toxic terror.

Continued use of the "80 to 90 percent" figure reveals, however, not an urgent warning, but a cavalier attitude toward scientific truth. *Toxic Terror* is a wide-ranging examination of the slipshod science and fear-mongering propaganda of what Elizabeth Whelan, executive director of the New York-based American Council on Science and Health, calls "chemophobia."

The figure attributing 80 to 90 percent of all cancer to environmental causes exemplifies how that myth has been nurtured and sustained. It comes from a study of certain types of tumors among African and American blacks, conducted by Dr. John Higginson, founding director of the World Health Organization's International Agency for Research on Cancer.

Higginson concluded, Whelan says, "that about two-thirds of all cancers had an environmental cause and were, therefore, theoretically preventable." But by

"environmental cause," Higginson told the journal *Science* in 1979, he meant "the total environment, cultural as well as chemical... Environment is what surrounds people and impinges on them," including personal habits, such as smoking, alcohol and drug abuse, diet, tanning, and sexual and reproductive patterns, as well as living place, therapeutic medical procedures (including drugs and radiation), high doses of non-medical radiation, and occupational exposure to substances such as asbestos and vinyl chloride.

Directly contradicting the "America is poisoned" lobby, Whelan cites a classic work on cancer epidemiology, Sir Richard Doll and Richard Peto's *The Causes of Cancer* (Oxford University Press, 1981). This study, by best estimate, attributed 78 percent of cancer deaths to personal habits and living place. Medical procedures account for 1 percent, and infections may cause up to 10 percent. Though Jane Fonda's best-selling *Workout Book* tries to alarm millions of women with the warning that "cancer is a byproduct of the petrochemical age," the more scholarly Doll and Peto find that the best estimate of cancer deaths caused by pollution is 2 percent; by industrial products, less than 1 percent.

Thus a legitimate statistic is put to political use, exploiting the public's contextual misunderstanding of the word *environmental*, to put more chemicals under government control. Meanwhile, Whelan points out, "the carcinogens-around-us

**HOW TO GET RICH
TRADING GOLD!**

**How To Make A
Killing In Florida
Real Estate**



Which one of these ads is a fraud?

If you have no way of knowing for sure . . . that could spell financial disaster. That's why as an investor you need protection against the sharks and swindlers that are so smooth they're virtually indistinguishable from the real McCoy. At this moment there are thousands upon thousands of investment professionals who have a civil/criminal RECORD (even in banking)—yet are still in the business TODAY! And there are rip-offs, never even reported in the media—that are perfectly legal! Some so ingenious, that even after you lost your money, you wouldn't realize you'd been had.

Yet their new clients are often in the dark about these dealers' past histories. That is, until they get badly burned financially. How do you as a legitimate investor protect yourself against these shysters and rip-off artists?

***The Investment Black Book:* The only book of its kind in the world.**

This carefully compiled listing gives you the scoop on thousands of individuals who have defrauded investors, violated government regulations and received legal reprimands or citations (not criminal offenses, but highly significant).

The Investment Black Book is a notorious "Who's Who" of the bankers, stockbrokers, commodity brokers, investment advisors, real estate salesmen, investment planners, currency dealers, gem salesmen—and why you wouldn't want to do business with them. Never before has so much dirty laundry—from small town stockbrokers to internationally known investment figures—been brought together in one place. How about the people who manage your financial affairs, who own the banks that have your money? Set your mind at ease and protect yourself and your family with *The Investment Black Book*. Learn everything you need to know about the rogues of the investment world.

***Investment Frauds, Rip-Offs and Cons:* Secrets Of The Trade.**

To be fully protected in today's financial piranha pool, you not only need to know the dirty players, you also need to know the games they play. This special report shows you step-by-step how investors are victimized—often in ways that are perfectly legal—by frauds, quacks and incompetents who don the mantle of government-approved respectability. We'll open your eyes to government regulations which actually help the crooks more than the victim of a scam. *Investment Frauds, Rip-offs and Cons* will clue you in about the con-artists who can smooth talk you into an investment in a non-existent gold mine and the commodities brokers who are experts at breaking your bank.

You may not enjoy reading this report—much of it is downright frightening. All its material is inside information which comes directly from law enforcement agencies. And some of it is so "inside", it comes straight from investment crooks. But we urge you to read it carefully because your financial survival could depend on it. *Investment Frauds, Rip-offs and Cons: Secrets of the Trade* is one investment you can't afford to pass up.

FREE! 3 Months Of Investment Protection

We're sure that once you've examined *The Investment Black Book* and *Investment Frauds, Rip-offs and Cons* you'll make them an invaluable part of your financial reference library. But the fact is, as quickly as we expose them, up pops another new con artist

and new scam ready to grab your hard earned money. That's why you need protection on an on-going basis.

But where can you find the facts you need to make sound investment decisions every month? Where do you uncover those dirty secrets that would make you drop some stock like a hot brick? From an investment newsletter perhaps? Not likely.

The 500, or more, investment advisory periodicals published in the U.S. today offer opinion, useful information, and lots of tips about investing your money. But all are flawed in one vital aspect: they assume that 90% of investing is ethical.

But last year a new investment publication was launched, a monthly newsletter that goes beyond opinion. *INVESTigate* digs up the dirt of investment intelligence and uncovers the "secrets" you should know before you invest.

INVESTigate's staff of editors and journalists are able to uncover the kind of information you can't find in the rest of the financial media. They are plugged into the law enforcement network . . . they have access to Interpol . . . and they know how to dig up data on people and companies that was buried and forgotten.

INVESTigate gives you a unique, behind-the-scenes look at the stock market . . . who's making it . . . and who's losing it. We'll also give you specific stock recommendations and keep you posted on the latest economic trends, with information you can use every day.

How much could *INVESTigate* be worth to you?

If you act now, you'll receive three FREE months of *INVESTigate: the Journal of Investment Protection* when you order *The Investment Black Book* (Regularly \$18.95) and *Investment Frauds, Rip-offs and Cons* (Regularly \$14.95) all for only \$18.95 (a \$53.40 value). Use the convenient order form and place your order today.



Make check payable and mail to:
**Investment Publishing Group,
P.O. Box 2606, Winter Park, Florida 32790**

Yes . . . Please rush me

The Investment Black Book, and Investment Frauds, Rip-Offs and Cons: Secrets of the Trade, PLUS Three FREE months of *INVESTigate* all for just \$18.95 (a savings of over 64%).

Enclosed is my check or money order for the total.

Please charge VISA AX MC

Card # _____ Expires _____

Signature _____

Name _____

Address _____

City _____ State _____ Zip _____

To order by phone: 

**Call Toll-Free 1-800-851-4653
In Florida 1-305-628-5300
(Please call between 9-5 EST)**

the book case

Included among these natural poisons is aflatoxin, one of the most powerful carcinogens known, especially suited to growing on grain foods and peanuts, and tolerated by the Food and Drug Administration to a hazard level 667 times higher than the EDB residue levels set by the EPA. In addition, of the three effective substitutes for EDB, two contain proven carcinogens and two are more poisonous than EDB.

Whelan points out that "there is no evidence" that exposure to trace levels of pesticides "increases the risk of cancer, birth defects, or any other human ailment"—no evidence. "The EDB phenomenon could happen only in a highly affluent society. . . . The preoccupation of most of the world is not with traces of pesticides or additives. . . . The reality is that we compete with insects for food. Losses on a global scale have been estimated to be as great as 45 percent."

Similar stories are told of other chemicals: DDT, PCBs, PBBs, formaldehyde, dioxin. Cases of hazardous misuse can almost always be found, but proper use has presented many benefits and no demonstrable hazards. Why, then, do we rarely hear a perspective like Whelan's in the mass media?

The mass media are geared to the crudest outlines of an issue, and reporters are not just looking for the facts but for a story—and that requires drama. Scary anecdotes and dire warnings are, as the *Washington Post* has put it, "red meat." Cautious evaluations of peer-reviewed articles in staid scientific journals are—well, boring.

Moreover, Whelan astutely observes, when it comes to reporting on controversial chemical or technological issues, "it is *de rigueur* for the media to concoct a debate format." This lends drama. It also looks like the media are presenting both sides of an issue—even when one side offers pseudo-scientific hysteria and "even though the protechnology guest represents 99.9 percent of the scientific community's views." Certain alarmist scientists (and organizations) even become widely known, seen, and read as *the* experts in their field, since they are among the few scientists who can be counted on for a dramatic and scary story—often because, Whelan charges, they "feel free to cite data rejected by consensus of the scientific community."

Some examples: Dr. Ernest Steinglass, whose definitively refuted charge that the Three Mile Island nuclear accident caused "several hundred" infant deaths

reads like a textbook example of how to lie with statistics; Dr. Beverly Paigen, whose study of birth disorders in the Niagara Falls (Love Canal) region was rejected in 1980, by a panel of physicians appointed by the governor of New York, as "literally impossible to interpret";



Reporters are not just looking for the facts but for a story, and that requires drama—scary anecdotes and dire warnings.

Lewis Reginstein, whose *America the Poisoned* (Acropolis) was still, in 1982, citing Paigen's study as authoritative proof of a disaster at Love Canal; Dr. Samuel Epstein, whose *The Politics of Cancer* (Sierra Club, 1981) contended that we are in the midst of a cancer epidemic, when in fact, except for steep increases in lung cancer, cancer incidences and mortalities have declined sharply or remained steady for decades, adjusting for age and depending on the site.

While *Toxic Terror* is thorough, illuminating, and convincing, it has some an-

noying flaws. Whelan is clear but not much of a stylist, and the book has many clumsy jokes and phrasings. In addition, in trying to catch her quarry off-guard, Whelan makes some arguments that are either trivial or nonsensical: She says that "the environmental alarmists like to point to carcinogens and poisons in the air of our cities. . . . Cigarette-induced air pollution, however, doesn't interest the environmentalist."

Well, first, a concern with toxins in the air doesn't sound like alarmism to me. (The book is sprinkled with red-flag phrases like this; even the subtitle talks about "environmental fanatics.") Second, it just doesn't seem to be true that cigarette pollution doesn't interest environmentalists. Anyway, industrial air pollution is a more public issue than smoking: You *can* smoke without polluting the air of others; you *can't* run a coal-fired powerplant without doing that. Advocating regulation, Whelan never considers arguments for dealing with air pollution by more clearly defining property rights, as a growing body of free-market environmentalists proposes. Does *she* therefore think we should regulate smoking, too?

These problems with the book crop up when Whelan is trying to use emotional persuasion through wit, indignation, or exposure of hypocrisy. It doesn't work here, but it doesn't have to. *Toxic Terror's* persuasive power comes from thorough and sober analysis. It is a breath of fresh air in the public debate on toxic substances in the environment, soundly separating hysterical fear and politicized science from cautious concern and good science.

David Stewart is a free-lance writer in Madison Heights, Michigan.

Big Business: Friend or Foe of Hitler?

By Ralph Raico

German Big Business and the Rise of Hitler, by Henry Ashby Turner, Jr.
New York: Oxford University Press, 528 pp., \$25.00

Capitalism, according to economist Joseph Schumpeter, stands its trial before judges—the intellectuals—who already have the sentence of death in their pocket. As evidence for this dictum, consider the succession of arguments used to vilify the system. Capitalism, critics argue, condemns the working masses to poverty; it decrees the an-

nihilation of the middle classes between monopoly capitalists and pauperized proletarians; it leads to military and political expansion into the precapitalist world, thus producing increasingly frequent conflicts among the capitalist nations; it maintains or destroys (take your pick) the family unit; and so on. No sooner is one argument rendered dubious or nuga-