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as a carcinogen (cancer-causing agent) in the bacterial assays that are commonly used to take sugar substitutes and food additives off the shelves? Did you know that 20 percent of the earth's elements are carcinogenic (and not because of their radioactivity)? Did you know that many essential nutrients, such as selenium, zinc, and manganese, are carcinogenic-and some of the same (selenium is the most notable) have also been shown to be anticarcinogenic?

As Efron so effectively demonstrates, the one thing that scientists have been able to prove about cancer over the last 15 years is that it is *not* the result of some simple-minded process of "one-time exposure to a known carcinogen." There are obviously layers of defense mechanisms in our bodies that separate us from the "sea of carcinogens" in which we

Yet this same simple-minded assumption-that we can drive all the "known carcinogens" out of the environmenthas been the basis of the entire federal regulatory effort of the last 10 years. We wring our hands and cry "scandal" about a few parts-per-billion of some food preservative in our diet, while we regularly ingest much larger amounts of natural carcinogens with every meal. In this light, the nation's hysteria over "industrial carcinogens" looks more and more like the efforts of the medieval Flaggelants to cure themselves of the plague by stripping their own flesh to shreds.

As Efron also notes, the most obvious fact about cancer in the United States is that it is not increasing. Far from the public hysteria, scientists are quietly wondering about the "Paradox of Rehn": why has the increased use of industrial chemicals not caused an 'epidemic'' of cancers, as a Swiss doctor named Rehn had predicted in 1895?

America ranks far down the scale of industrial nations in cancer incidence. Some of the highest rates of cancer in the world are recorded in India, Africa, Southeast Asia, and rural Canada. Without the big increase in lung cancerwhich is obviously tied to smoking-American cancers would be notably declining. Yet still, Dan Rather intones that "America leads the world in cancer," which he calls the "disease of the century.'

The Apocalyptics is a truly heroic effort-the attempt by one lone individual to stem the tide of irrationality that has gripped the nation over the last 10 years on the cancer issue. Most remarkable is Efron's report that, out of the dozens of

academic scientists who have praised the book in manuscript form, every one of them has requested anonymity! The peer pressure within the scientific community to "go with the flow" and blame industry for the mythical "epidemic of cancer"instead of acknowledging the disease's obvious worldwide incidence and correlation with nonindustrial factors in our environments—has apparently reached the point where it can torpedo reputations and sink applications for government grants.

My advice to author Edith Efron and to publisher Simon and Schuster right now would be to take this monumental work and distill from it 120 pages of readable prose that could easily slip into the hands of secretaries as they ride home from work on the bus. Then this book will take on the dimensions of another Silent Spring, which it so richly deserves.

My advice to anyone who can't wait for that is to read this book now.

Contributing Editor William Tucker is a journalist who has written often on environmental issues. His book Progress and Privilege was published last year by Doubleday.

Throwing Out Government to Save the Bathwater

Water Crisis: **Ending the Policy Drought**

By Terry L. Anderson Baltimore: Johns Hopkins University Press; Washington, D.C.: Cato Institute

121 bb. \$15.00/\$7.95

Reviewed by R. Bruce Den Uyl

erry Anderson's Water Crisis provides an excellent introduction to "the new resource economics"-that body of work, increasingly well received, which brings together traditional economic insights, a regard for individual property rights, and a concern for the environment. Like Water Rights: Scarce Resource Allocation, Bureaucracy, and the Environment—the companion volume edited by Anderson and reviewed by Steve Hanke in the January REASON-Water Crisis is directed toward an academic audience. And while there is a



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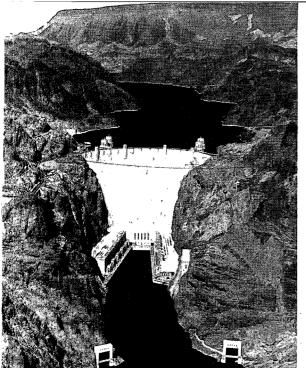
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The Hoover Dam on the Colorado River is one of the government's many water projects. Without market pricing, the government must build ever more of them to balance supply and demand.

need, as noted by Hanke in his review, for a more stimulating, popularly oriented discussion of these matters that might be more widely read, Anderson's new book does take an important step in showing how privatizing water resources could alleviate a potential water crisis.

Anderson begins by quoting government projections that forecast an impending water crisis in many areas of the country, particularly in the West. My own review of many of these same studies suggests that we are many years away from all but isolated water shortfalls, even if present policies continue. However, this is a minor criticism.

The real problem is not that we will be unable to take showers in a few years but that present policies waste billions of dollars in misallocated resources and necessitate the construction of ever more water projects. This is because, as Anderson points out, current policies keep water prices below "market-clearing" levels. In a market, the price of water would rise until the quantity demanded at such-and-such a price equaled the quantity that suppliers would sell at the price. But in the nonmarket of governments' water policies, the only way to balance supply and demand is to build more water projects to increase

Most readers of REASON probably know that the federal and state governments subsidize water production in the West, keeping the price low, at taxpayers' expense. Perhaps less well

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known is that there used to be a body of laws in the West (referred to as the Appropriation Doctrine), which established a system of private rights to water. The rights were clearly defined, enforceable, and transferable, thus facilitating a market for water. Unique to the West, this system was developed by pioneers facing a relative scarcity of water. Anderson provides an excellent discussion of the system's evolution and how it differed from the Riparian Doctrine followed in the eastern United States.

Since some people never seem to know when they have a good thing going, however, the courts and politicians started tinkering with the Appropriation Doctrine. According to Anderson, people argued against a fairly pure system of private rights to water for several reasons.

First, they feared that one company could come to control the price of water in an area. Anderson finds no empirical basis for this claim and suggests that individuals could tap groundwater resources or form associations to impose a bilateral monopoly to overcome this potential threat.

Second, some argued that private markets would be unable to provide the necessary funds for large projects. This constraint, Anderson contends, would be unlikely to occur if a project looked profitable.

But the biggest objection to private markets is the problem that economists have dubbed "externalities." More on this later.

nderson points to four basic restrictions on private water rights that have contributed to the present-day misallocation of water resources. The first is the requirement that unless water is applied to a beneficial use (such as agriculture), the right to a prescribed quantity of water will be lost. This not only encourages wasteful overuse but also keeps water prices low for prescribed beneficial uses. Water may be more valuable, say, in a coal slurry pipeline, but unless this is designated as a beneficial use, the right cannot be transferred. The second restriction is preferential use, which dictates a pecking order of uses (for example, manufacturing over agriculture) having little to do with economic value. Third, there are restrictions preventing transfers of water away from the water source so that water that is not consumed will replenish the ground source. Finally, federal reclamation projects restrict transfers of water and how water is used.

The most interesting chapters of *Water Crisis* address how to privatize instream flows (water flowing in streams, rivers, etc.) and how to resolve the "common pool" problem associated with groundwater resources. Both chapters consider the sticky issue of externalities.

Many people suggest that in a freemarket setting, with instream flows privately owned, amenity or recreational uses of water would be given short shrift. Yet private, environmentally oriented groups such as the Nature Conservancy and Ducks Unlimited devote private resources to preserve these uses, which are threatened under the present system of political determination of water uses. Anderson points out that in Great Britain, instream flows have been privately owned for centuries.

Groundwater presents a classic common-pool problem, where many users have unchecked access to a depletable resource. When no rights are established, there is an incentive to pump faster than one's neighbor, which raises pumping costs and induces accelerated use to avoid even higher pumping costs tomorrow. Anderson lays out an excellent system for assigning property rights to groundwater supplies. Rights would be transferable to maximize efficiency and to induce the owners to consider the opportunity costs of using water

Although *Water Crisis* may not divert the potential reader from other activities on a Saturday night, it is highly recommended reading. Perhaps Anderson still will meet Steve Hanke's challenge to write a popular book on the subject that everyone, even politicians and bureaucrats, will enjoy enough to grasp the insights of the new resource economics applied to water.

R. Bruce Den Uyl is a specialist in natural-resource policy.

Double Jeopardy

Judgment in Berlin By Herbert J. Stern New York: Universe Books 384 pp. \$15.95

Reviewed by Henry Mark Holzer

On the quiet morning of August 30, 1978, amidst the then-silent ghosts of Hitler's Germany, a small Polish airliner made an unscheduled stop at