

BRITTLE POWER
by Amory B. Lovins
and L. Hunter Lovins

(Brick House Publishing Co. [Andover, Mass.]: 486 pp.; \$8.95/\$17.95)

Albert L. Huebner

When German U-boats began sinking coastal oil tankers during World War II, the nation's response was to build long-distance oil and gas pipelines, ignoring their serious vulnerabilities. The 1973-74 Arab oil embargo alerted millions of Americans to energy vulnerability, but in the panic that followed, policy-makers rushed to relieve foreign oil dependence without considering the new vulnerabilities that their substitutes created. This pattern was repeated in 1979, driven by a 1 per cent reduction in world oil availability during the Iranian revolution that brought gasoline lines and a 120 per cent price increase in the United States.

Amory and L. Hunter Lovins claim that, in clinging to the narrow view, we have heedlessly—and needlessly—imposed on ourselves an energy system that is perilously fragile. A reliable system would supply "all kinds of energy in the face of all

CONTRIBUTORS

Mary Jane Checchi, Legislative Counsel for the United Mineworkers, served as Staff Director and Chief Counsel to the U.S. Senate Majority Leader in 1978-80.

Philip R. Lee, Director of the Institute for Health Policy Studies at the University of California, San Francisco, has written several books on the pharmaceutical industry. Jane Sprague Zones is Pew Postdoctoral Fellow in Health Policy at the Institute for Health Policy Studies, UCSF.

Ralph Buultjens, Professor of Political Science at the New School for Social Research, is the author of several books on international politics and political philosophy.

Sterett Pope is a freelance writer who specializes in Mideast affairs.

Robert J. White is an Associate Professor in the Department of Classical and Oriental Studies at Hunter College.

Albert L. Huebner teaches physics at California State University and does documentary programming on science for station KPFFK, Los Angeles.

James W. Spain, who has served as Ambassador to Tanzania and Turkey, is currently a Foreign Affairs Fellow at The Rand Corporation.

John E. Becker is Worldview's Literary Editor.

possible disruptions—foreign or domestic, civil or military, accidental or deliberate, foreseen or unforeseen." In contrast, the energy that runs America is brittle: easily shattered by accident or malice.

Brittle Power, based on research commissioned by the Federal Energy Management Agency, begins by tracing this pattern of proliferating vulnerabilities. World War II is a logical place to start. In retrospect, one of the costliest strategic errors made by the Allies was the failure to bomb major power plants in Germany. High Nazi officials, including Goering and Speer, acknowledged that systematic targeting would have curtailed the war, perhaps by as much as two years.

A study done a few years ago by Britain's Royal Commission on Environmental Pollution provided a new insight. It concluded that if nuclear power had been in widespread use during World War II, some areas of Central Europe would still be uninhabitable because of contamination. Today's weapon systems could cause this kind of contamination anywhere in the developed world, even if no nuclear bombs were used.

Not that anything like full-scale military operations are necessary to shatter the nation's fragile energy supply. By official count of the Department of Energy, terrorist attacks on energy facilities in the U.S. are occurring at the rate of one every three weeks. This makes it more than a little disturbing to read that:

- a small group could shut off three-quarters of the natural gas to the eastern U.S. in a few hours without leaving Louisiana;
- a terrorist squad could seriously disrupt much of the oil supply to the nation;
- one saboteur could incinerate a city by attacking certain natural gas systems;
- a few people could release enough radioactivity to make much of the U.S. uninhabitable; and
- a single hydrogen bomb could probably do all these things simultaneously.

Malicious acts aren't needed to produce widespread suffering and disruption, however; if the system is brittle enough, accidents will do. For example, the accident at Three-Mile Island imposed an enormous psychological burden on nearby residents, depressed property values sharply, drained the public utility's finances, and crippled the entire nuclear power industry. Page after page of *Brittle Power* recounts similar, if less widely reported, horror stories.

Despite this depressing catalogue of disasters, the book kindles hope. Fragile systems can be replaced by those that are resilient—that is, systems that rebound from stress without collapsing or, better yet, that

can profit from stress by using it to improve their ability to rebound. The Lovinses employ an innovative synthesis of biological and engineering models to determine the elements that contribute to resiliency. They arrive at a long list that includes fine-grained, modular structure, redundancy, diversity, simplicity, accessibility, and understandability. The centralized power systems that supplied virtually all energy in the U.S. until a few years ago lack most of these qualities, which is precisely why our power is so brittle.

The quickest and easiest way to improve resiliency is by increasing the efficiency of energy use, a move that reduces the need for energy without imposing any burden on the user. Next in line is a mix of small-scale, renewable sources, such as solar, wind, and small hydro systems. Ironically, power development has proceeded in exactly the reverse order, favoring the most brittle systems and ignoring the most resilient.

This began changing in the late 1970s. Resilient energy technologies are also the consumer's best buy, while brittle systems are the worst. That's why increased energy efficiency and small renewable sources have provided new energy about a hundred times as fast as centralized-supply projects during the past few years. If all options are allowed to compete on an equal basis, operation of a free market will automatically improve the resilience of the energy system and make it environmentally more benign as well.

Brittle Power would be worthwhile reading even if its authors used their considerable expertise merely to show that our vast, technologically sophisticated energy network, rather than promoting our security, threatens it at every level. That they go on to lay the solid foundation for a solution to this problem makes the book indispensable. WJ

STAFFING FOR FOREIGN AFFAIRS
by William I. Bacchus

(Princeton University Press: xxiii + 250 pp.; \$25.00)

James W. Spain

The emphasis of this book, as its author stresses, is on systems, not individuals. The result is an excellent survey of the various schemes by which the United States Government has attempted to staff itself for carrying on foreign relations. Needs, weaknesses, and strengths of the personnel sys-

tem are presented clearly and concisely. The consequences of the Foreign Service Act of 1980 (the design and passage of which owes much to the author) are carefully laid out. So too are the problems the 1980 act did not solve, for example, the specialist versus generalist controversy, the role of families, the public image. Much material is presented in tabular form, and some of this—like the career sketches offered in the introduction and the “Dilemmas of Personnel System Design” after chapter four—adds a valuable third dimension to the work. Because of its comprehensive and systematic approach, the book will be required reading for many years for anyone involved in thought, talk, or action on this subject.

Staffing for Foreign Affairs also contains a number of important insights, most notably that, however great the diversity of the tasks assigned to those in the foreign affairs field, their principal difference lies in whether they are carried out overseas or in Washington. This distinction cannot fail to have a major impact on the whole pattern of selection, training, assignment, and promotion that is at the heart of any personnel system.

Mr. Bacchus’s ideal for overseas work is not much different from that of the established Foreign Service. He emphasizes traditional diplomatic skills, although he does point out that, ironically, just as the Foreign Service’s stress on the diplomat as manager was reaching its peak, the size of U.S. programs to be managed was decreasing. His description of what is required of Washington’s foreign affairs bureaucrats focuses on the “new issues agenda.” For a role model he chooses the “policy synthesizer”—one who is adept at blending all the different interests within the Executive’s expanded foreign affairs community and public and congressional concerns, thus producing an effective and defensible foreign policy.

The Foreign Service Act of 1980, with its Foreign Service/Civil Service system, is seen by the author as a major step toward a personnel system designed to meet this dual need. First, it provides for greater continuity in Washington and for increased specialization among those who work in Washington and overseas; and it makes possible, although it does not guarantee, a personnel management system run by personnel professionals.

Much of this makes eminent good sense. But before we are able to pass final judgment on who and what our foreign affairs professionals should be, we need another book—one on the same subject by an overseas professional. Mr. Bacchus’s view is

primarily from Washington, and Washington is only half of the foreign affairs equation. The overseas half has a point of view too, and this is not well represented in the present volume.

This matter of the key roles in foreign affairs and the kind of person best fitted to play them brings us to an argument that parallels the one about career professionals versus political appointees as ambassadors. No one denies that the ideal is to combine knowledge of the United States, its interests and policies, with skill and experience in dealing with foreign peoples and problems. Personifications of the ideal are rare, however, and the real question is whether it is easier to teach politicians about foreigners or professional diplomats about America.

The answer, of course, varies with the people involved. You can teach some politicians (and “policy synthesizers”) about foreigners and some professional diplomats (and other expatriates) about America. Others you cannot. But you can never—if our foreign policy is to have any rationality and consistency at all—have two separate groups going their own way, one synthesizing in Washington and one persuading and negotiating in the field. The idea that this kind of personnel approach, even when modified to provide for exchange and integration, is desirable grows out of the false concept of the nature of policy-making held, often understandably, by those who feel themselves closest to and most keenly aware of that most sacrosanct of government functions.

Today, policy has the absolutist flavor that theology had in the Middle Ages. National decisions are assumed to be the product of an inspired but rational structure crowning the public cosmology. Once pronounced by the learned doctors, policy can be readily carried out by well-trained technicians and specialists; in medieval terms, by parish priests, wandering friars, and cloistered monks. But then a Francis of Assisi, a Peter the Hermit, or a Martin Luther springs up, or a Black Death, Mongol invasion, or industrial revolution comes along and it becomes quickly apparent how ephemeral and transitory is established theology/policy. The churches finally learned that the word and the act are inseparable; it’s time governments did too. If Foreign Service Officers would benefit from a knowledge of how hard it is for the State Department to respond to congressmen who, in turn, must respond to their constituents, so too would Washington policy synthesizers benefit from a knowledge of the derision, incredulity, and hostility with which many of their high-tech syntheses are greeted around the world.

However, Mr. Bacchus cannot be faulted for not having written a different book. What he did produce is comprehensive, generally balanced, and thoughtful. All Americans and non-Americans interested in how we carry on our foreign affairs will benefit from it—and most particularly our career diplomats. :WV

**RELIGION AND POLITICS
IN THE MODERN WORLD**
edited by Peter Merkl
and Ninian Smart

(New York University Press; ix + 276 pp.; \$30.00)

John E. Becker

Although the editors express the hope that this book will be a “major crossing” of the artificial boundaries between two disciplines, the boundaries seem for the most part to remain intact. The “ground-breaking” essays of the first section, with the exception of Raimundo Panikkar’s “Religion or Politics: The Western Dilemma,” are sketchy, salting discussions of nationalism with a few loosely used religious terms. Panikkar posits an existential dilemma: “Religion without politics becomes uninteresting, just as politics without religion turns irrelevant.” Panikkar likes neologisms, “sempeternity,” and “advaitic,” but his discussion is stimulating and en-



“Bertram, who do you know
who would send us
an un-recycled Christmas card?”

PUNCH