

**ECONOMICS, LABOR & BUSINESS**

and the educational institutions that supply it. She likewise opposes a shift to technical and vocational training (the National Planning Association says that of all jobs available, 80 percent involve essentially routine tasks requiring no particular skills).

A realistic solution, Berger argues, must take account of those who regard education as a tool for self-discovery. When bonded with the New Consciousness, celebrated in 1970 in Charles Reich's best-selling *The Greening of America*, the revived Enlightenment goal of "self-fulfillment" requires that work not only be safe, well paid, and of short daily duration, but also that it be "nonmanual, nonroutine, and nonmonotonous; interesting, creative, challenging, and capable of providing personal meaning...."

The author predicts that Washington will eventually be compelled to supplement a private sector incapable of producing enough "meaningful and fulfilling" jobs for the college-trained. The jobs must relate to social goals—such as better health, education, recreation, and environmental protection. Such "people work," Berger concludes, could mean new agencies for community development, political participation, and "intergroup conflict resolution," not meaningless bureaucracies.

**RESOURCES & ENVIRONMENT***A Forecast of Suffering*

"Population vs. the Environment: A Crisis of Too Many People" by James R. Echols, in *American Scientist* (Mar.-Apr. 1976), 345 Whitney Ave., New Haven, Conn. 06511.

A historical process of "demographic transition" from high birth and death rates to low birth and death rates has brought relatively stable populations to North America and most of Europe. A comparable process is not occurring in many undeveloped countries. Although death rates have fallen, thanks to better medical care, birth rates remain high. Echols, former head of the Population Reference Bureau, suggests that the current "momentum of population growth" is too strong for the demographic transition to be completed in the poorer countries without a temporary return to higher death rates.

Echols examines three 100-year projections: (a) if present worldwide fertility rates remain constant, and average human life expectancy remains at the current 55 years, world population could theoretically reach 24 billion by 2075—a near impossibility because of higher death rates from starvation; (b) if fertility rates fall to a level of one-for-one "population replacement" by 2025, and mortality rates remain stable, world population will almost double (to 8 billion) by 2050, then fall to about 7 billion by 2075—but Echols notes that reducing fertility to

**RESOURCES & ENVIRONMENT**

"replacement" levels in 50 years would mean halving the lowest population increase achieved anywhere in recent years; (c) if fertility decreases to replacement level by 2025, while higher mortality rates in the poorer, hungrier countries gradually cut average world life expectancy from 55 years in 1975 to 45 in 2025, world population will stabilize for the following 50 years, while mortality slowly decreases and life expectancy rises to 63. This last projection suggests a stable world population of about 6 billion by 2075 but, says Echols, the price will be "terrible suffering for the less developed Southern Hemisphere."

*Conserving Energy: A Blunt Instrument*      "Save Energy, Save a Soul" by Eugene Bardach, in *Commentary* (May 1976), 165 E. 56th St., New York, N.Y. 10022.

"Energy conservation is a solution in search of a problem," writes Professor Eugene Bardach, of Berkeley's Graduate School of Public Policy. The alleged benefits of energy conservation include reducing America's vulnerability to oil embargoes, saving the environment, and protecting the welfare of future generations. But none of these worthy goals, Bardach argues, is best achieved by reducing energy consumption.

The appropriate U.S. response to the threat of another Arab oil embargo consists of an oil stockpile, import quotas (which can automatically reduce fuel consumption if Washington permits prices to rise), and the counter-threat of military intervention. Environmental degradation can best be prevented by regulation and pollution taxes—not by invoking conservation measures with environmental protection as a side-benefit. Assuring energy for future generations, says Bardach, requires a "technological solution" that will be found through an effort spurred by rising energy prices. The solution will not be found simply by agreeing with those conservationists who reject all energy proposals that appear to fail their "net-energy-yield" standard (which specifies that energy sources should be developed only if they will yield more energy than is consumed in their development).

*E = Time + \$*

"Some Thoughts on New Energy Sources" by Bertram Wolfe, in *Nuclear News* (May 1976), 244 E. Ogden Ave., Hinsdale, Ill. 60521.

Recent public debate on America's energy problems has tended to focus on issues of safety with little concern over whether advanced technology can actually produce a new energy system (nuclear, solar, or whatever) in time to avoid serious economic and social dislocations. Wolfe, a General Electric nuclear power specialist, examines a number of energy proposals and finds that none avoid significant economic and