

synchronized by a computer and focusing sunlight on a certain point, where the accumulated energy is converted into electric power. Such a plant built on a commercial scale would require financial investment perhaps three times that needed for a nuclear power station.

More ambitious proposals call for solar power generation involving satellites that focus sunlight from outer space onto giant orbiting energy-generating stations linked by a flood of microwave radiation to still larger collectors on earth. Specialists believe that such a scheme will be technological as well as commercially feasible within some years, calling for astronomical capital investments and leading to the next industrial revolution.

SOLAR POWER IN THE HANDS of the multinational corporations is already used to pump water for irrigation, generate electricity on a small scale for isolated villages, dry and cook rice, produce ice for storage of food and medicines, heat homes, and so on. But many of these news-catching solar power projects are still in the experimental stage; and some of the most spectacular ones are also the most expensive. Short of a technological breakthrough, they could well remain too costly for the poor villagers.

The fact is that solar technologies range from the very simple--which means that the big companies are not, as a rule, interested in them--to the extremely complex, such as the photovoltaic cell, originally developed to power the instruments of space satellites, whose commercial cost on earth is prohibitive. Most of the solar pumps powered by photovoltaic cells in the Sahelian region of Africa have been donated through foreign aid programs. For the present it is the multinational corporations that control the market for solar technology, and it is they who will develop the technological solutions to overcome the current price barriers to the widespread use of solar energy.

But the poor countries must have solar power now if they are to fulfill even a fraction of the material aspirations of their people. They therefore

constitute a vast market for solar technology and face the danger of becoming consumers of Western technology that is made available to them at an incommensurate price in both economic and political terms.

Thomas Land writes on world affairs from Europe.

EXCURSUS III

WILLIAM LOOMIS on
"GOOD NIGHT, IRENE"

In an open field my great-grandfather watched two ducks fly across a Tennessee moon. He wore the blue wool uniform of the Union Army, Michigan 43rd. He carried a small diary and wrote that two other men kept him company, one from Michigan, the other a boy of sixteen from Ohio. The Rebels were close. So close they could hear one of them strum a guitar and sing. He sang "Good Night, Irene." They listened in silence. My great-grandfather wrote, "Five men in my Company went mad listening to that Rebel singing. The boy from Ohio cried all night long and the next day was killed by a sniper before the battle even began."

I LOOK AT THE FACES of people with whom I work, at my friends, at the American leaders, the president on television, and I suspect they are listening to that Rebel singing "Good Night, Irene" as we draw closer and closer to a nuclear war.

Here we are back again with our finger on the button, ready to unleash weapons with enough power seemingly to split the earth right in two. As our knowledge of the weapons grows, so too does our dread of their destructiveness.

Over the past decade or more since we've scaled down our expenditure on weapons, have we used the peace wisely? I don't think so. While the Russians built up their Red Army, dug their fallout shelters, and fortified their missiles, we were enjoying waterbeds, Super

Bowls, and watching Truman Capote shake his booty at Studio 54. As the money wanes and the "Me Decade" comes to a close, maybe we will hear that voice in the night singing "Good Night, Irene." The Russians' intention seems clear--we were deceived about détente and we may pay dearly for this.

Nobody wants a nuclear war, but in the faces around me I read that we deserve it. A wise man, a Thucydides perhaps, might have informed us that this is our fate.



THE UNION ARMY WON THE WAR, but my great-grandfather was killed several mornings after he saw the ducks and heard the Rebel singing. The sense of humor conveyed in his diary struck me more than anything. He was amused by the absurdity of the situation and his own self-importance. I could hear him chuckle at our own dilemma; though we claim to be fighting for our Super Bowls, both sides hear the voice in the night and know that, though our weapons are great, perhaps because our weapons are great, we too may be blown away in the morning.

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EXCURSUS IV

WALTER C. CLEMENS, JR., on
FREEDOM AND FIDELITY

The Vienna State Opera Company's production of "Fidelio" at Washington's John F. Kennedy Center in October, 1979, was a high point in the life of the Western world. It also serves as a reminder of the lack of freedom throughout most of the Communist and Third worlds.

Beethoven's only opera was dear to him, and it has long been dear to Vienna, where he conducted its first performance in 1805. It was the first opera produced by the State Opera company after World War II; the first performed after Austria was liberated from four-power rule in 1955; and the first opera given by the Vienna company on its first U.S. tour.

Fine music and fine musicians transcend all national frontiers. But the supranationalism of the stellar JFK performance was remarkable. The Vienna Opera and Philharmonic were conducted by an American Jew, Leonard Bernstein--"also one of ours," said Austrian Chancellor Bruno Kreisky before the performance. Florestan was sung by another American, Jess Thomas, and his devoted Leonore by the Welsh soprano Gwyneth Jones.

"Fidelio" celebrates conjugal love, steadfast devotion, endurance under adversity, friendship, and fraternity--most of the themes that resonate in the more familiar Ninth Symphony, written some eighteen years later, in 1823. It rebukes the repressive rule of Pizarro, who imprisoned and starved Florestan and finally sought to stab him to death.

"Fidelio's" ideals are seldom achieved in daily living, but they are within reach throughout Western Europe, North America, Australia, New Zealand, and Japan. The countries of this domain are indeed the "First" world today. They are first in freedom as well as living standards. They share the democratic and tolerant traditions that make it possible, for example, for a president and his major rival to stand side by side to honor a fallen president, even as one