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## Science Policy

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# Science in the 21st century: strategic and philosophic aspects

by Marjorie Mazel Hecht

*The following is the written text of Mrs. Hecht's address at the closing session of the Congress of the Brazil Nuclear Energy Association (ABEN) on Sept. 2. Hecht is the managing editor of 21st Century Science & Technology magazine.*

*More than 500 nuclear scientists and engineers attended the week-long conference in Rio de Janeiro, whose theme was "Nuclear Energy and the Revival of Economic Development." A main topic of the conference was the fight to ensure that the Brazilian nuclear program continues and that construction of Angra 2, the long-delayed second nuclear plant, is completed.*

I am very happy to be here at this congress, first because I believe that nuclear energy and, in particular, advanced forms of nuclear energy and fusion, are the key to our being able to support a growing world population at increasing living standards. Second, I am happy because your country, Brazil, is still a country of optimism, and it is this scientific optimism, combined with political will, that make progress possible and that can rescue the world from its precarious state.

For the past 20 years or so, I have been a science writer and editor.

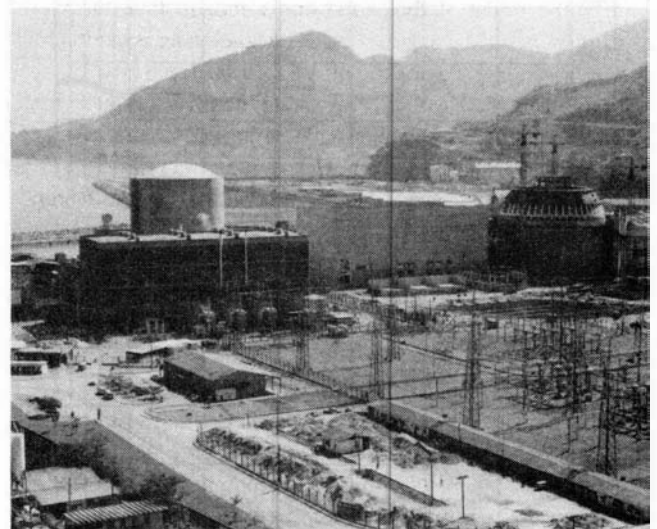
I am lucky to be old enough to have known in person some of the great scientific figures of this century: Dr. Robert Moon, a nuclear physicist who worked in the Manhattan Project and invented and built many of the scientific instruments in the project and who worked closely with *21st Century*; the space scientist Krafft Ehrlicke, who developed the science and technology to industrialize the Moon; Dixy Lee Ray, who needs no introduction to you, and whose courage in telling the truth and fighting for progress—even when this meant saying some harsh things to her colleagues in the nuclear community—have been an inspiration to me; and Edward Teller, whose wit, creative ideas, and tenacity are still impressive.

### Only 'extremists' still believe in progress

I'm also old enough to have had grandparents and great-grandparents who came to America at the end of the last

century from Eastern Europe, to make a better life for their children. They told me stories of the old country, the poverty, the oppression, the hard work just to survive—and they gave me an appreciation of how technology can improve the quality of life—basics like electricity, central heating, refrigeration, for example—by lightening the physical labor required to raise a family, giving people time to develop their minds. And, as it has been throughout history, it is those minds, their creativity, that are the hope for the future by coming up with new solutions to new problems.

I have mentioned these personal things, because today in the United States, to believe in progress, to see science and technology as the hope for the future, is not "politically correct." Thus, *21st Century* magazine and I are attacked as "right wing" or even "extremist" because of these views. In the past 25 years, pessimism, cynicism, irrationality have taken hold. Children are routinely indoctrinated in school into a world view that sees man only as a polluter, a rapacious being, the essence of whose lifestyle is to trample on other

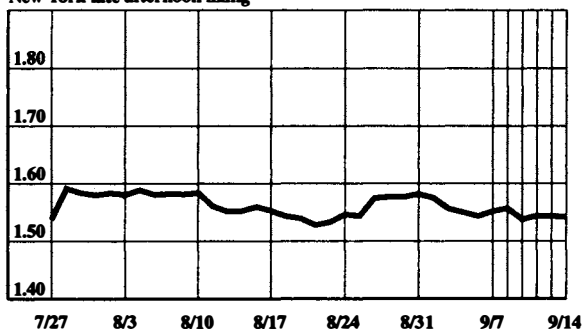


*Brazil's Angra 2 nuclear power plant, still under construction. Will Brazil's nuclear scientists and engineers ensure that the nuclear program survives?*

# Currency Rates

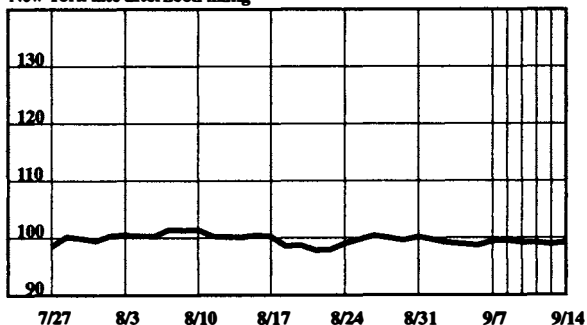
## The dollar in deutschemarks

New York late afternoon fixing



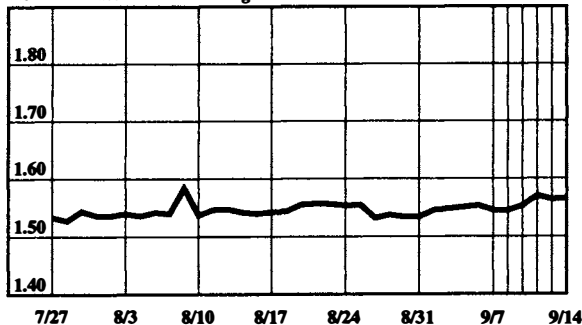
## The dollar in yen

New York late afternoon fixing



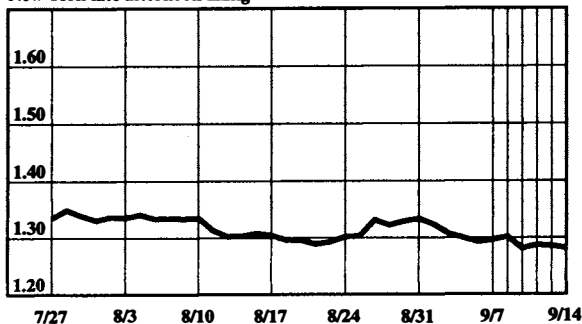
## The British pound in dollars

New York late afternoon fixing



## The dollar in Swiss francs

New York late afternoon fixing



species. So, today, to assert that mankind is qualitatively a higher species than plants and animals makes me an "extremist" in an atmosphere where the outgoing president of the American Association for the Advancement of Science, Sherwood Rowland, who is also the inventor of the ozone depletion theory, can state in the *New York Times*:

"If the latter half of the 20th century has been marked by human liberation movements, the final decade of the second millennium will be characterized by liberation movements among species, so that one day we can attain genuine equality among all living things."

This is an example of what science has become in the United States.

During the past 25 years, America has declined from being an industrial and agricultural leader, a country that produced real goods and creative science to a country with a service economy. Industries have closed down, food and steel are imported, basic infrastructure—water systems, bridges, sewage systems—is collapsing, environmental regulations that do almost nothing to improve the quality of life cost each American family several thousand dollars a year, and science and technology have shrinking budgets.

Having lived through this decline, and having fought it through the pages of *21st Century* as well as politically, and having proposed positive solutions, I can say that truly this is a war, and at stake in this war is the future of civilization. Already there have been many casualties—millions of people, for example, who died of malaria and other debilitating diseases because a small group of U.S. environmentalists decided in 1972 to ban DDT, and then went on to ban other useful and relatively harmless pesticides.

The two sides in this war are diametrically opposed. One side sees a world based on reason, science, and technology, where the human soul is considered sacred and where the development of the mind, creativity, is nurtured. The other side measures a human being solely by the amount of solid waste it produces in one year. (For your information, the *Environmental Almanac* states that each person in the United States creates three-quarters of a ton of solid waste per year.)

What does this mean for you, the Brazilian nuclear community? I think that whether we win or lose this fight will depend on what you do, whether you will have the courage to fight to win.

## Know your enemy

This means telling the truth about your "enemy," stating in as stark as terms as possible the consequences of the enemy's proposals and policies, telling them that people will die as a result of their anti-technology views. It means standing up to the establishment, when, for fighting for science and telling the truth about the environmental extremists, you yourself are called an extremist or an exaggerator. It means *not* following the example of the American nuclear industry, which decided to be "nice" to the environmentalists, to work

with them, to fund them over the last 20 years, an industry that considered our pronuclear magazine “too radical.”

It means digging into the history of the environmental movement: who funds them, who is behind them. The facts will shock you. They have continued to shock me, although I have been looking at this for many years.

What rational person could conceive that, immediately after World War II, after millions of people had been killed, a small group of oligarchs would rush to put into effect a plan for population control, aimed especially at black, brown, and yellow peoples? Who could conceive of the evil ideas of Bertrand Russell or H.G. Wells, who were willing to support anything—including nuclear war—to stop civilian nuclear power from being developed and enabling the world to support a growing population? Who could imagine that behind the nice cute-animal-loving environmental groups there is a small group of the wealthiest people in the world, including the royalty, who have created animal preserves and land preserves in order to run drugs, smuggle goods, loot raw materials, and train guerrilla armies to carry out the wars that depopulate places such as Rwanda. Who would imagine that behind the enviro-babble of “empowering women” and “reproductive health,” stands this same small group of oligarchs and their helpers which intends to use the population conference in Cairo to put into place a one-world government whose draconian, anti-science, and anti-people regulations will supersede national laws?

This is some of the shocking history that *21st Century* will present in detail in future articles. Our aim is to give “ammunition” to the scientific soldiers in this war to save civilization, to arm them so that they can fight to win over the minds of the majority of the so-called environmentalists who think that they are saving a fragile Earth or a cute species and have no idea of the consequences of their actions.

### **The future we can build**

But the picture is not entirely grim. Our world is a mess, yet change for the better is within our reach. Who would have thought that the Berlin Wall would come down, that Israelis and Arabs would not only decide on peace but would do so around a development program that includes great projects and nuclear-powered desalination? Even in the United States, where there is a nominally antinuclear administration and a Department of Energy whose top staff is right out of the anti-nuclear Natural Resources Defense Council and Union of Concerned Scientists, there is hope for change. The administration is backing a civilian nuclear program for North Korea, for example, as a way of bringing that nation into the 20th century. This is a very important political opening, and one we have to support and broaden.

And there is more on the good side: Today we have so many exciting technologies that are state of the art, but that have not been developed to their full potential: Food irradiation, superconductivity, nuclear propulsion, magnetically

levitated trains, biotechnologies, advanced nuclear reactors. There are yet even more technologies not yet at this stage, technologies that will be created by the next generation. And science today has the potential of discovering and understanding how the universe works, from the very small—biophysics—to the very large—astrophysics.

This scientific legacy is ours. It is what scientists and intellectuals of the past few hundred years fought for. Its development will enable us to lengthen the human lifespan, to bring the developing sector up to the living standards of the industrialized nations, to take mankind out to settle other planets.

But this can only happen if you act now and fight for it, not just in the confines of the scientific community, but in the broader world community. It can only happen if you see in the sharpest way possible that whether civilization survives or we devolve to a Stone Age culture depends on what you do.

I appeal to you, to ABEN, to fight. Don't let the environmentalist leaders—these elitists with their six-figure salaries—don't let these yuppies take your scientific optimism away. Don't let them steal your future and your children's future.

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## **Letter to the editor**

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### ***More people needed to maximize development***

The Aug. 26 *Feature* story comparing the physical economy of Taiwan to the People's Republic of China was an excellent demonstration for the policies of *The Science of Christian Economy* [by Lyndon LaRouche, Washington, D.C.: The Schiller Institute, 1991]. But I want to volunteer one possible shift of emphasis.

The authors imply at several points that the continuous technological progress in Taiwan's physical economy—the rise in *potential* population density—made possible the rapid growth in Taiwan's population density since World War II. Actually, it appears from the data presented, that Taiwan's already high population density as of 1960 (higher then, than Japan's today), preceded the greatest boom period of Taiwan's physical economy. Taiwan's population density in the 1960s was nearly five times that of the Mainland; now it is about three times as high. The gap in productivity and wealth per capita, however, is greater now, than it was then.

Why not conclude that Taiwan's relatively very high population density in the postwar period, when its growth seemed to be most rapid in that parameter, was an essential condition for the rapid technological progress and per capita growth of its physical economy since? It is not simply that nations *may have* higher population density by virtue of economic development; they need more people in order to maximize that development.

Sincerely,  
Paul Gallagher  
Dillwyn Correctional Center  
Dillwyn, Virginia