

Chapter Two

INTERLUDE*

OF A NEW BOOK BEING CREATED ON THE PAGES
OF THE TRIBAL MESSENGER BY STEVE BAER

BASIC TECHNOLOGY

It is difficult for us to see ourselves in relationship to the machinery, equipment, and gadgets of our technology. What would the Board of Directors of IBM think if they visited their headquarters and found their scientists and business men had abandoned work with computers and instead were engrossed in elaborate yo-yo contests? Our own absorption in our technology, abandoning interest in human and moral problems, is similar to the scientists and business men leaving their jobs to play with yo-yos — except that our games with technology are perverse and dangerous.

Then what do you do? You try to improve the situation. A problem today is that we are burning our oil and coal at a terrific rate to provide our economy with energy, the end of the supply of such fuels is in sight. Burning large quantities of oil and coal fills the air with smoke — in many parts of the country you can hardly see. What does one think when he sees energy used to light enormous and hideous advertisements, when it is used to manufacture and transport junk that people most certainly do not need, when it is used by a gigantic military organization which has already perverted the society it claims to defend? Can anyone believe that feeding this sick monster is an urgent task? If someone's body is using energy rapidly to maintain a fever the first order of business is to cure the fever, not to feed it. Our culture is bringing attention to itself crying that it is almost out of its favorite food. For its health it seems it should eat less and also change its diet. Today it is important for us to find new ways to heat and cool buildings, new ways to move about, less extravagant ways to enjoy ourselves. The answers to energy problems are different for different parts of the country. Some places have abundant sunshine, some wind or geothermal energy or hydraulic power. Other parts of the world are barren of energy sources and must import coal, oil, gas or electricity. One of the most dangerous traits of our government, our engineers and businessmen is the compulsion for single nation or world-wide solutions. Thus a heating system is uninteresting to them if it would have application only in the Southwest. They feel compelled to think big, and working on products for specific local problems is a humiliation. How absurd this is, such thinking would lead a man to refuse to buy shoes since they don't fit on his head or his hands.

The response of our government to the energy crisis has been to pour hundreds of millions of dollars each year into atomic energy research and almost nothing into wind, solar or geothermal energy research. Atomic energy would be the answer if the sun were going to black out, but no one is predicting this. The people doing the work with atomic energy admit that it is dangerous and produces radioactive wastes that must be carefully guarded for hundreds of years. Who will benefit from this competition with the sun?

SCIENCE AND TECHNOLOGY

Our large corporations and the war department grasp science like a bandit with a hostage, "If you are going to attack us, you are also going to harm our innocent friend, science." Many scientists have been only too ready to relax in the grasp of their captor — confident that no one would risk injuring them. This is very clearly no longer certain. Perhaps it is time to begin throwing rocks at the pair.

If there has been a perversion of the direction taken by invention and technical development, that it has grown preponderantly in ways that we now are beginning to judge dangerous, then we may take comfort in this — technology branches again and again. It has been trained to grow in a most peculiar course, but is ready to sprout and branch at numberless past forgotten junctions.

As an example I would mention the Yis-sol pump. Levi Yessir demonstrated a very simple elegant solar powered pump at the 1968 Solar Energy Convention that did not greatly differ from Savery steam engines used to pump out the mines in England in 1700. Its promise lies in the huge range of inexpensive liquids with different thermodynamic properties available today that were not available to James Watt and Thomas Savery. When someone such as Levi Yessir or Harold Hay returns to first principles in their work with solar energy they are undercutting more elaborate work done by others. In a field that is young and does not yet have wide and vigorous application the really valuable inventions and techniques may be hidden for years by a dynasty of petty paper writers and paper investigators.

ICE

One business that needlessly consumes millions of dollars of electrical energy is the production of ice. It used to be common practice to harvest ice from ponds and rivers, but with the advent of refrigeration machinery this fell out of fashion. We should get back into the business, this time exploiting modern insulation and modern methods of moving materials.

In almost the entire country ice is made with mechanical refrigerators powered by electricity. Here in Albuquerque ice sells for \$.03 a pound in blocks, and \$.07 a pound crushed. Firewood, hauled from miles away and cut into stove-size pieces sells for \$.015 a pound, adobe bricks, cured and stacked, sell for \$.005 a pound. It is strange that ice is so expensive. Here in Albuquerque at least six feet of ice can be

harvested from shallow ponds or water filled trays during a year. This is over 300 pounds per square foot of pond. If the value of ice were \$.01 per pound, each square foot would yield a harvest of \$3.00 per square foot or \$125,000 an acre. The production of ice with electrically powered refrigerators requires approximately \$.15 per 100 pounds of ice so an acre of ice ponds would save approximately \$19,000 in electricity each year.

What work must one do to make the ice? One way would be to have plastic trays filled with a hose during the afternoon and to lift off the ice in the morning. During very cold weather two layers could be harvested each day. Some people would object at first to shards of ice from the top of a pond, "Why this looks like it was pulled off the top of a puddle," but eventually users of such ice, if the layers were still recognizable, would realize that the texture of a bag of ice chunks spoke of the severity of the previous winter and it would be as interesting as a bag of oranges. The storage of such an ice harvest is the most difficult part. If the ice were stored in a huge insulated pit, the mass of ice might lose a rind two feet thick during a year as heat travelled through the walls and melted it. An efficient ice ranch would require considerable capital to make the insulated storage, and also an efficient way to handle the daily harvesting of the ice. Think of the difference in the lives of the crews who worked at an ice ranch with its own peculiar reversed harvesting weather, versus a crew who work in the exact same circumstances year in, year out, handling a refrigeration machine.

There is a texture to reality, good and bad, a mixture of fortune and misfortune. If this texture is presented to people always