

again to the ring-conduit as soon as the arrival of the corresponding train is announced.

Joined to the warehouse will be different loading docks for trucks, as well as the connection to a freight station to make possible the transition to the normal freight transportation network.

The tracks of the long-distance trains are double track in both directions. It is unimportant for the structure of the transfer station whether the long-distance trains are wheel-on-rail or maglev system trains. Both systems can exist in parallel at a transfer station. The palettes must, in any case, be steered and driven magnetically, since the rapid and safe positioning, as well as the necessarily short switching time and the high motion dynamics of the palette will be attained only in this way.

Maglev freight transport

Since 1977, no research worth mentioning has been done on the use of maglev trains for freight. Nonetheless, it is obvious that Transrapid, even in the form developed today, is appropriate for any freight that is now sent by air. The capacity of 0.2 tons of payload per vehicle-meter is not sufficient for most freight transport. With a further reduction of the maglev vehicle's air gap, which could possibly lead to a lower speed, the transportation capacity can be increased. A European research program for electromagnetic freight transport, however, should be unconditionally started. This program should start from a realistic statement of the tasks, that within the next 20 years the volume of freight that might be transported in Europe in accordance with the standards that are today only attained by air freight, will increase by 70-80 million tons per year.

At the end of May, the press reported that France had offered East Germany favorable financial terms to build a TGV connection between Berlin and Dresden. [*Train à grande vitesse*, or TGV, is the name of France's national high-speed passenger rail system—ed.] That is a wonderful development. It would be better if this route were immediately extended to Prague, and a TGV connection of Berlin-Hamburg can possibly be made by East Germany before the German Bundesbahn wakes up. It is important to act rapidly to exploit the potential that has been created by political developments. If the officials of some national railroads cannot be awakened from their dreaming of the last century, and they continue to skeptically oppose anything new, then opportunities must be created for those who want to develop new activities. If the principles of physical economy presented in this program are kept in mind as basic ideas, then those activities will also be profitable. Friedrich List and Heinrich Harkort would attempt today to found a new European Rapid Train Corporation with entrepreneurs who are ready for production. Exactly such an initial activation is what we need for the acceleration of individual national programs.

Book Review

How to sow terror with statistics

by Margaret Sexton

Currents of Death: Power Lines, Computer Terminals, and the Attempt to Cover Up Their Threat to Your Health

by Paul Brodeur

Simon and Schuster, New York, 1989

333 pages, \$19.95

The trouble with Paul Brodeur's book, which claims that there is a danger to human life and health from electromagnetic radiation from power lines and computer terminals, alleged to cause cancer, is that it is incompetent. If you are an expert in manipulating statistics, or in the methodology of "risk assessment," you might be able to make some sense out of the mishmash of studies and statistics Brodeur cites.

The key to confusion here is risk assessment. In this form of statistical manipulation, someone somewhere fed animals, such as rats, physiologically unrelated to human beings, huge amounts of toxic substances. Then, an extrapolation is made to determine the risk to humans, often so small as to be parts per billion or parts per trillion. In other words, you'd have to eat a ton of "X" to show signs of toxicity, but a part per billion of "X" is deemed to put the ingester of "X" at risk.

The way Brodeur uses this to stir his pot can be seen in a random example: "The reason why people living in towns adjacent to the PAVE PAWS [phased array] radar are developing cancer at a rate far higher than other people living on Cape Cod . . . may not be found for some time to come. Moreover, because of the Air Force's policy of dumping millions of gallons of aviation fuel and other toxic waste into the sandy aquifer, scientists trying to solve the mystery will have to take many factors into consideration. One such factor . . . will be the question of whether chronic exposure to low-level radiation from PAVE PAWS has acted to promote . . . cancer in people who are already at risk because they have been exposed to cancer-producing chemicals."

Brodeur then goes on to discuss how a protein enzyme found within human lymphocytes is a receptor for cancer-producing phorbol esters, a carcinogenic plant. What does

that have to do with radar? Or aviation fuel contaminating groundwater? Brodeur doesn't say; the reader is supposed to assume all these things are connected.

This book seems aimed at environmentalists seeking to boost their argument that we should go "back to the Pleistocene"; or at those who have a fear of technology, such as that nurtured against nuclear power in the mass media for years. A more recent example is Hollywood actress Meryl Streep's campaign against the growth-regulator used in apples, Alar. That campaign of hysteria has just about destroyed the apple-growing industry. Ms. Streep, when she got on television to bleat about Alar, never said that you would have to eat thousands of apples sprayed with Alar every day in order to risk cancer.

So, Mr. Brodeur, do the public a favor. You don't have to lump together every statistical occurrence of cancer in a given location with every study on electromagnetic fields, and assume they're connected. If you have a hypothesis to prove, why don't you go back and look at the methods of some truly great scientists like Johannes Kepler? He did not have popular support for his theory of the laws governing planetary motion, but he was able to prove it to the satisfaction of the doubters of his day.

Mr. Brodeur, maybe if you improve your method, you can figure out how to sort through your mass of papers and find the truth. And that's what your readers deserve.

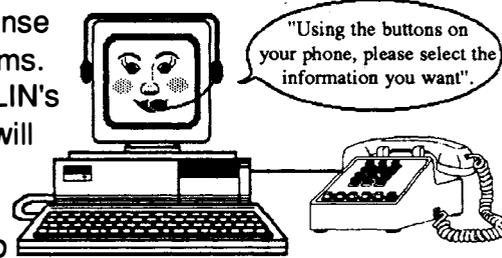
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