

# TOWERS of BABBLE, BAGS OF GOLD: Cells, Lies and the "Wireless Revolution"

# by James Heddle & Mary Beth Brangan

"I have no doubt in my mind that, at the present time, the greatest polluting element in the earth's environment... more serious even than global climate change and chemical pollution... is the proliferation of electromagnetic fields." Robert O. Becker, M.D.

#### **MICROWAVED YANKS**

From 1953 to 1976 the Russians irradiated the U.S. embassy in Moscow with a steady 24-hour-a-day bombardment of radio frequency radiation. The embassy staff members experienced loss of ability to think, to concentrate and to sleep. The American ambassador came down with leukemia and had to be replaced. Then the second ambassador came down with leukemia and also had to be replaced. Staff blood samples sent back home for analysis showed DNA damage and a loss of ability to repair it. Staff dysfunctions continued.

The Russians knew what they were doing. They had reproduced in the embassy staff the same symptoms they had previously identified under experimental conditions as "Radio Frequency Sickness Syndrome." They had proven that radio frequency radiation - RFR - can be used as a weapon against either a specific target group or against the general population.

The irony is, this same technology is now being touted as an aid to public safety.

#### **IONIZE THIS**

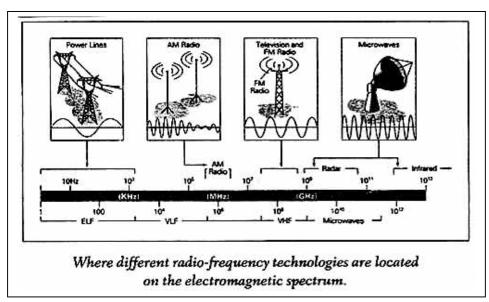
The electromagnetic spectrum stretches from so-called "ionizing" forms of radiation like x-rays, gamma rays and other nuclear radiation, down through visible light to the so-called "non-ionizing" frequencies now associated with TV, microwave communication technologies, cell

phones, radar, AM & FM radio and electric power transmission lines.

Research on the biological and human health effects of non-ionizing frequencies began in the second world war with the introduction of radar. Studies of military personnel showed evidence of affects on blood count, mutation, cell reproduction, the occurrence of cataracts in the eyes, headaches, fatigue and increase in the occurrence of some cancers.

But there was a war going on. RFR exposure was seen as just another risk of war and few details of the research results reached the general public. The "safety" standards developed for military personnel were based on the so-called "thermal" effects of RFR - the heating of living tissue in the same way a microwave oven cooks food. Current U.S. standards of "safe" RFR exposure for the general public are still based on this "thermal effects" level.

However recent research indicates serious biological and human health effects at very low, "non-thermal" exposures. The now documented bio-effects of low level RFR exposure include: infertility, memory loss, childhood leukemia, adult leukemia, lowered reaction time, DNA damage, immune system dysfunction, weakened blood-brain barrier and sleeplessness.



Furthermore, the work of researchers like Dr. Henry Lai, Dr. Ross Adey and Dr. Jerry Phillips show that such effects as DNA strand breaks are produced not only by short-term exposure at high intensity, but also by long-term, chronic exposure to low intensities - like that increasingly experienced by growing numbers of people from cell phone towers and microwave communication facilities.

#### **NATURAL BACKGROUND**

For millions of years, life evolved on earth where the natural background level of radio frequency radiation has been very low. Then starting only a hundred years ago, the explosion in wireless technologies like radio, TV radar and microwave has boosted our everyday RFR exposure levels by at least ten thousand times.

Our bodies - and each of the cells within them - are like antennas: exquisitely sensitive receivers AND transmitters of electro-magnetic radiation. Now, they must function in a new electro-magnetic environment that already has ten thousand times more RFR than the one in which they - and we - evolved. And today, a new wireless revolution is in progress, with the number of cell phones, communication satellites, microwave antennas and cell phone towers multiplying daily. That means even more RFR exposure for all of us.

## "WHEREVER YOU GO, THERE WE ARE."

In order to grasp the truly staggering implications of this burgeoning wireless industry "build-out" you have to understand what the "cell" in cell phone means. Each cell phone tower emits its signal in "lobes" - a circular "flower petal" pattern with a limited radius spreading 360 degrees around the tower. This circle of radiation around the tower is called a "cell." If you're in a cell, your phone gets good reception. If you're not, it doesn't.

In order to provide "total coverage" for cell phone users, antenna towers must be positioned throughout the landscape so that their "cells" essentially overlap - like a tabletop covered with plates. Cellular One's slogan - "wherever you go, there we are" - takes on ominous overtones when you realize that no community - rich or poor, ghetto or gated - will be free of cell towers, which are now going up in California almost as fast as old growth redwoods are coming down.

Add to this the knowledge that more than 2000 communications satellites are raining down a constant shower of radiation on our heads round the clock. Plus military projects like ELF, HAARP and PAVE-PAWS - designed to control weather patterns, send longwaves through the earth to nuclear-armed submarines at sea, and even influence the physical, emotional and mental states of entire target populations - and you begin to get a sobering picture of the huge and escalating amount of electromagnetic pollution with which we are deluging ourselves, our children and the entire biosphere.

Do we know for sure what the effects have been, are, or will be? We do not. But, despite ongoing, mostly successful efforts by industry, government and military to confuse, distort, spin and suppress emerging research data, scientific studies from brave, independent, honest investigators like Drs. Robert Becker, Lai, Adey and Phillips continue to raise red flags of danger.

New Zealand researcher Dr. Neal Cherry's recent world survey of recent research studies documents far more than enough evidence to convince any reasonable, responsible person that a "precautionary approach" is indicated. More than enough evidence to support an international call for halting the lemming-like rush over the cliff of the "wireless revolution" until we know for sure what we're doing to ourselves - not to mention all the planet's lifeforms.

PUBLIC HEALTH or CORPORATE PROFIT? Is it "The Economy, Stupid?" Or the Stupid Economy? Investment in the telecommunications industry has increased from \$20 billion in 1996 to \$475 billion in 2000 - an increase of 2,200%. Big money. Money that can buy politicians and legislation favorable to industry - like the industry-crafted Federal Telecommunications Act of 1996, which actually attempts to forbid local regulation of cell tower placement on the basis of human health or environmental concerns!

Big money that allows the industry giants like Motorola to spin the scientific research to confuse or misinform the public and to discredit, defund and ruin the careers of scientists whose research shows "negative effects." Big money that enables the industry to come into local communities bearing gifts to support legitimate community needs - like new fire engines, schools and health clinics.

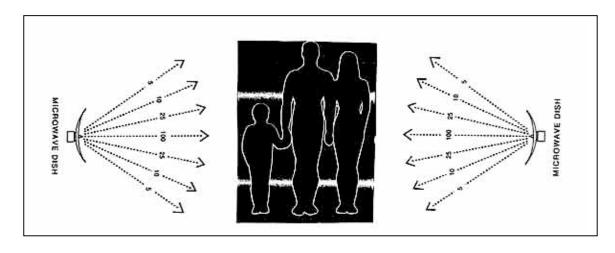
Big influences that can deliberately misinform and confuse good, beloved people into making unfortunate decisions with nothing but the highest intentions for the welfare of their community at heart.

Our experiences in researching and producing our new independent investigative documentary, **PUBLIC EXPOSURE: DNA, Democracy and the 'Wireless Revolution'** makes us very troubled about the plan to add new antennas to the existing ones already on the two towers at our local firehouse. Right next to the village playground. Right over the site for a projected local health clinic!

It makes us dubious of the Marin Emergency Radio Authority's plan to site 17 new transmission towers at locations around Marin county - which already has the highest rates of breast and prostate cancer in the country - all in the name of "public safety!" It makes us cringe when ill-informed, but influential opinion-makers dismiss the growing fact-based popular resistance to the wireless buildout as, "public hysteria."

And - given the facts documented Henry Lai that RFR like that from cell towers causes DNA damage, and by O. Ghandi, et al, that the radiation from a cell phone penetrates further into a child's small, growing head even more than into our own adult brains - it makes us alarmed at the fact that gullible, uninformed people are buying cellphones worldwide at the rate of 25 thousand a day and succumbing to PR campaigns like the one that shows a picture of a crib and bears the legend: "No Member of the Family Should Be Without One..."

Award-winning Bay Area documentary producers James Heddle and Mary Beth Brangan are co-founders of E.O.N, the Ecological Options Network. <a href="www.eon3.net">www.eon3.net</a> (415) 868-1900 <a href="eon3@earthlink.net">eon3@earthlink.net</a> For More Information, Contact: The Council on Wireless Technology Impacts: <a href="www.energyfields.org">www.energyfields.org</a>



### Sources

"TV Broadcast Towers and Cancer: The End of Innocence for Radiofrequency Exposures" Dr. John Goldsmith, M.C., M.P.H.; American Journal of Industrial Medicine 32:689-692 (1997)

"The End of Innocence: Human Health and the Effects of Radiofrequency Exposures from Cellular Phones, Cellular Phone Antennas, and Television Broadcast Towers" Scientific Reviews and Personal Commentary by Dr. John Goldsmith, M.C., M.P.H.

"Epidemiologic Evidence Relevant to Radar (Microwave) Effects," Dr. John Goldsmith, Department of Epidemiology and Health, Services Evaluation, Ben-Gurion University of the Nagev, Beer Sheva, Israel; Environmental Health Perspectives, Vol. 105, Supplement 6, December, 1997.

ELECTROMAGNETIC FIELDS: A Consumer's Guide to the Issues and How to Protect Ourselves; B. Blake Levitt, New York: Harcourt Brace & Co, 1995

The ZAPPING OF AMERICA, Paul Brodeur, New York: W.W. Norton & Co, 1977

THE BODY ELECTRIC, Robert O. Becker and Gary Selden. New York: William Morrow, 1985.

CROSS CURRENTS: The Perils of Electropollution, the Promise of Electromedicine, Robert O. Becker and Gary Selden. Los Angeles: Jeremy P. Tarcher, Inc., 1990

ELECTROMAGNETIC FIELDS: A Consumers Guide to the Issues and How to Protect Ourselves, B. Blake Levitt, Harcourt Brace and Co., 1995

Lilienfeld, et al, Foreign Service Health Status Study: Evaluation of Health Status of Foreign Service and Other Employees from Selected Eastern European Posts. Final Report contract 6025-619073 (NTIS PB-288163). Washington: U.S. Dept. of State, 1978

Daily LE. A clinical study of the results of exposure of laboratory personnel to radar and high frequency radio. U.S. Naval Medical Bulletin 41: 1052-1056 (1943)

Barron CI, Love AA, Baraff AA. Physical evaluation of personnel exposed to microwave emanations. J Aviat Med 22:442-452 (1955).

Goldoni J. Hematological changes in peripheral blood of workers occupationally exposed to microwave radiation. Health Phys. 58:205-207 (1980).

Lai, H. and Singh, N.P., "Acute low-intensity microwave exposure increases DNA single-strand breaks in rat brain cells." Bioelectromagnetics, Vol. 16, pp 207-210, (1995).

Cherry, N., Lincoln University, New Zealand, "Actual or potential effects of ELF and RF/MW radiation on accelerating aging of human, animal or plant cells." (June, 1998)