

**The 2006 Government Mind Control Debate: book review of  
*Mind Wars: Brain Research and National Defense* by Jonathan D.  
Moreno**

**by Cheryl Welsh, director, Mind Justice, December 2006**

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# **The 2006 Government Mind Control Debate: book review of *Mind Wars: Brain Research and National Defense* by Jonathan D. Moreno**

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## **Summary**

Many experts are claiming that mind control weapons will be developed in the twenty-first century and public debate and government oversight are called for. New research and information is now available. A thank you to Dr. Moreno for opening up a debate on brain research and national defense and for addressing the alleged government mind control victims in a nonjudgmental way. In his 2006 book, *Mind Wars: Brain Research and National Defense*, Moreno concluded there are no advanced government mind control weapons. This paper presents a counterargument and the rarely heard fifty year history and facts indicating the likelihood of already developed, advanced mind control weapons.

The consequences are serious. The public knew of the immense power of the atomic bomb and could debate and protest. The very classified advanced EMR weapons are known to be in development but are completely surrounded in government denials, cover stories and disinformation. No solid facts from the government have been forthcoming. The public has a right to be concerned now.

Moreno is an ethicist, not an investigative reporter and he reported on the overwhelming consensus; that mind control is a conspiracy theory. Moreno failed to look beyond the common assumptions, interview impartial experts or analyze the comprehensive information required to come to a reliable conclusion. Instead he relied on very entrenched assumptions and overlooked important but hard to find information. Moreno was misled by the national security bully pulpit and government control of research on electromagnetic radiation (EMR) mind control weapons. How will the public find out about mind control weapons when they are developed?

This is a summary of a complex issue and facts and citations are included in the paper below. EMR mind control weapons are one of the deepest secrets of the nation and advanced EMR mind control weapons would be more powerful than the atomic bomb, according to experts. In the Cold War era, major nations developed EMR weapons in total secrecy, without public input. In the post Cold War era, the U.S. has gone public with some of its EMR weapons programs and the EMR arms race has spread mainly from the U.S. and Russia, to China and India.

Moreno wrote that he should have heard leaks about any long running government mind control program but he did not, so there must not be one. But Moreno is an ethicist, not an insider and he did not interview secrecy experts who agree that many insiders know of national security secrets held at the executive branch level. But there are rarely serious leaks of information and the public almost always remains in the dark. New facts continue to support the likelihood that advanced and very classified EMR mind control weapons have already been developed.

Moreno and others believe the lack of scientific theories and deployment of EMR weapons is proof that there are no advanced mind control weapons. But there are several indications of successful research and weapons. For example, there are hard to find, scientifically sound, general EMR-based mind control theories and successful demonstrations of EMR bioeffects research. Over the decades, there has also been the continuous discovery of 'new' mind reading technologies and EMR weapons but this is always followed by a government classification of the 'new' research as secret, so that mind control has remained a national security secret going back to the 1960s.

### **A commonly used scientific delay tactic**

Moreno discussed the belief held by many that since there is no worldwide consensus on a mind control theory, there couldn't be advanced mind control weapons. But the claim of a lack of a theory is an old, misleading, inaccurate but very effective scientific delay tactic. This tactic involves claiming a scientific certainty when there is none. A scientific theory is not essential for making scientific findings or discoveries. In addition, the empirical scientific method is defined as using trial and error or experience rather than theory and is a well accepted scientific method.

For example, tobacco companies suppressed known health effects linked to smoking for decades in order to maintain their profits and avoid lawsuits. In the 1950s, medical doctors observed serious health problems found mostly in their smoking patients. For years tobacco companies claimed there was no direct cause and effect evidence and no theory on which to base the doctor's claims. In 1994, tobacco company executives lied under oath to Congress, stating they didn't believe cigarettes caused cancer or were addictive. Tobacco company documents contradicted their testimony. For decades, tobacco companies had successfully employed several, misleading, scientific delay tactics, for example, discounting empirical evidence, suppressing unfavorable research and blatant lying.

Another example of this scientific delay tactic is the analogy to Cold War scientists who controlled scientific information surrounding the atomic bomb. Government scientists claimed a lack of scientific proof for a causal connection to alleged ill health effects and denied known health risks from ionizing radiation. Government studies and documents on radiation health risks were not publicly available. Today, declassified government documents show that the government suppressed government documents and studies that proved otherwise. In the 1994 book *Myths of August: A Personal Exploration of Our*

*Tragic Cold War Affair with the Atom*, Stewart Udall described his unsuccessful legal battles with the U.S. government over scientific evidence and classified government documents. Publisher's Weekly stated;

Above-ground nuclear bomb tests in Nevada after WW II made human guinea pigs of civilians living downwind in several western states, as later revealed by thousands of cases of radiation-induced cancer, childhood leukemia, burns and birth defects. In an expose of the government's decades-long policy of public deception concerning the hazards of radiation, Udall, secretary of the interior under JFK and LBJ and a former congressman from Arizona, condemns the U.S. nuclear testing program as a violation of the Nuremberg Code. He also describes his protracted struggle as a lawyer, beginning in 1979, representing the widows of Navajo uranium miners who developed cancer.

One final example, the U.S. military withheld information about possible links between Agent Orange and birth defects, and downplayed the defoliant's link to cancer. This was reported in the Sacramento Bee November 1, 1998, page A4.

Now this same scientific delay tactic can be seen in Cold War EMR bioeffects research and this has contributed to a lack of agreement on a scientific theory for how EMR bioeffects work or even if there are EMR bioeffects. One noted expert stated that EMR scientific uncertainty can be shown to be a result of industry and government inactions and policy. Simply put, the U.S. military wanted to keep EMR weapons secret. During the Cold War era, the government's cover story was; if there are "no proven EMR bioeffects then there are no EMR weapons." The government cited national security concerns to some EMR scientists who then cooperated and this cover story was successfully circulated publicly.

Moreno, like most experts do not report on Cold War/post Cold War EMR research and weapons history. This history is important because several human rights experts, military and civilian authorities, and top government science advisors claim that the bioeffects of EMR are a scientific basis for some EMR weapons and a biological basis of some brain function. Therefore, very powerful mind control weapons are scientifically feasible. Moreno and most experts state that decoding the brain is decades into the future and this fact virtually eliminates the possibility of the current development of advanced EMR mind control weapons. But Moreno does not explore the possibility that a brain theory could be classified. And scientific evidence of the bioeffects and psychological effects of EMR have never been disproven.

This could be all disinformation as Moreno believes. Moreno pointed out in his book that government funding of research does not prove anything. But what would account for this sweeping government effort surrounding EMR bioeffects research and weapons by major nations in the world since the 1960s and the escalating efforts in the post Cold War era? Not surprisingly the public is rarely informed of the Cold War history of the East/West

continuous funding of EMR weapons research. Russian classified mind control programs were revealed only as a result of the monumental event of the breakup of the Soviet Union. Mainstream press does not write of the post Cold War revelation of a flip flop on the U.S. policy for EMR bioeffects and subsequent 'new' funding of EMR bioeffects weapons research. Taken as a whole, the evidence suggests a reasonable probability of advanced mind control weapons developed by the U.S.

The evidence is clear that the systematic and misleading government scientific tactics are continuing today. The question becomes whether as a democracy, we want to allow this pattern continue in the name of national security. The denials from some experts that there are no health risks from EMR and there are no EMR weapons to worry about have completely overpowered any counterargument. There is a new post Cold War, patronizing and paternalistic campaign by some top scientists to stop 'bad' or fringe science and to save government money. These scientists are recommending that 'needless' EMR bioeffects research be discontinued, based on the claim that health effects have not been conclusively demonstrated. The campaign is extremely disingenuous, dishonest and egregious, given the known EMR bioeffects controversy and history which these scientists fail to mention. The counterargument and evidence today is undeniable but top scientists still deny vigorously and some use personal attacks rather than arguing on the scientific merits. This is science at its worst.

It will be up to the public to recognize the deceptive scientific tactics and the overwhelmingly powerful national security scientific culture. Top scientists such as the atomic weaponeers lied about radiation exposure health effects. Any trust in public and government officials has been lost and ought to be continuously questioned. In the case of EMR weaponeers, exposure of any ongoing unethical behaviors and the weak rationalization that this behavior is necessary for national security does not hold up in a democracy. Certainly, cigarette company executives, and also scientists who conducted the nonconsensual radiation experiments have not been judged harshly enough for the large numbers whose health was affected.

### **Cold War and new post Cold War EMR history**

The public has rarely been told the following key facts of EMR history. The 1984 BBC TV documentary, *Opening Pandora's Box*, explained how EMR health standards were set in the 1950s;

The safety standards for electromagnetic radiation, EMR, were set higher in the 1950s to allow the military to have unlimited use of EMR technology. At the time, American science reports suggesting EMR health effects of brain tumors, heart conditions, leukemia, cataracts and more, were ignored. The military was a major source of funding and reports were not followed up. The government safety levels for EMR were challenged in courts all around the world.

Microwave News, a journal on nonionizing radiation, for example, reported that radar men opposed microwave tower EMR health dangers. Air traffic controllers and police officers filed complaints. These court cases revolved around the validity of the safety standard. Dr. Milton Zaret, another Pandora scientist explained that most government committees who set the safety standards around the world were set up the in the same way as in the U.S. Members of the committee did not want to impede or put restraints on progress by tightening the safety standards for EMR. [The 1960s Project Pandora was run by the department of defense to determine if there were bioeffects from the microwave bombardment of the U.S. embassy by the Russians.]

The U.S. government wanted to avoid costly lawsuits and to be able to develop EMR technologies such as radar systems that were considered essential for national security. The EMR bioeffects scientific uncertainty and also opposing US/Russian scientific views on nonthermal effects of EMR continued into the 1980s. The official government position on EMR bioeffects never varied during the Cold War. Some experts still cite this position even as scientific evidence from U.S. military sources now refutes the old government stance. For example, Richard Garwin is a member of the JASONs, a high-level group of physicists, whose advice is usually classified and routinely sought by the Department of Defense. He coauthored the 1999 and 2004 Council on Foreign Relations, (CFR) reports on nonlethal weapons. In reply to email questions in 2005, he stated; ". . . In my analyses of the effect of radiowaves on people, I have never found any significant effect other than heating of the tissues. . . . So I don't think there is much in the threat of electromagnetic signals to control or disorient people by the effect on the human brain."

Dr. Robert O. Becker conducted research on EMR bioeffects from the 1950s-1980s and was a two time Nobel prize nominee for his EMR bioeffects research. He provided a rarely stated and startling new explanation for that time. In the 1984 BBC documentary, *Opening Pandora's Box*, Becker claimed;

The U.S. may very well not have any [secret EMR weapons] program whatsoever. On the other hand, it is equally valid to have such a program being conducted in even greater secrecy than the Manhattan Project was conducted. And the best cover story I could think of for that would be for the U.S. to portray itself to the rest of the world, as a nation that was discarding the possibility of EMR weapons, entirely, based upon its best scientific evidence.

In the post Cold War era, the U.S. belief that EMR bioeffects are significant and extensive is indicated by official policy and statements, and funding of the EMR weapons research. With the breakup of the Soviet Union, the Pentagon publicly unveiled the nonlethal weapons program including weapons based on nonthermal EMR bioeffects. Now the U.S. policy that there are "no proven nonthermal EMR bioeffects" took a 180

degree turn. The July 7, 1997 US News and World Report, *Wonder Weapons* article confirmed;

For hundreds of years, sci-fi writers have imagined weapons that might use energy waves or pulses to know out, knock down, or otherwise disable enemies-without necessarily killing them. And for a good 40 years the U.S. military has quietly been pursuing weapons of this sort. Much of this work is still secret, and it has yet to produce a usable 'nonlethal' weapon. . . . Scores of new contracts have been let, and scientists, aided by government research on the 'bioeffects' of beamed energy, are searching the electromagnetic and sonic spectrums for wavelengths that can affect human behavior. . . .

Here is a 2006 article describing current military interest in EMR nonthermal bioeffects weapons research and that EMR weapons are scientifically feasible and would likely be successful. The article reported on U.S. Air Force-sponsored weapons research and disputed the U.S. government's long held 'heating only' theory of EMR. The Russian research described below would indicate that the U.S., for national security reasons, would also have developed EMR weapons. But the reporter was skeptical of already developed EMR weapons, almost certainly because he is unaware of the history of the EMR bioeffects controversy. November 24, 2006, Defense Tech, *Directed Energy*, *US Bioelectromagnetic Weapons Research* by David Hambling, posted at [www.defensetech.org](http://www.defensetech.org);

Could new weapons stun or paralyze with a beam of radio energy?  
I have discussed proposals for 'bioelectromagnetic weaponry' in Defence Tech before, here and here, but for the first time details are emerging of Air Force-sponsored work in this field. This report, entitled "Interdisciplinary research project to explore the potential for developing non-lethal weapons based on radiofrequency/microwave bioeffects" -- states their goal:

Our research is to lay the foundation for developing non-lethal stunning/immobilizing weaponry based on radiofrequency (RF)/microwave(MW) radiation by identifying RF/MW parameters potentially capable of selectively altering exocytosis, the process underlying neurotransmitter release and hence nervous system functioning.

. . . The researchers at the University of Nevada have concluded that non-thermal effects of RF do exist and may be harnessed. In an abstract here (on page 317)- a study of Non-Thermal effects of RF Radiation on Exocytosis - states "The effects of RF exposure on catecholamine release that have been observed to date cannot be explained by an increase in temperature."

And there's more. Other work by the same team, is described here. It will also support a DEPSCoR- funded program that extends those studies to include microwave frequencies and to explore the effect of pulsed and CW RE/microwave exposure on skeletal muscle contractility. The suggestion is that a correctly tuned beam of microwaves (possibly pulsed or modulated) would be able to interfere with skeletal muscles. This might ultimately give a means of producing the same sort of non-lethal effects as a Taser -- but potentially from much greater range and over a wide area.

So far, the work has been entirely on 'in vitro' cell samples in the laboratory, and only modest alterations in cell function have been produced. This is a very long way from being able to actually influence a living creature. Any suggestion that this sort of weapon has already been fielded by the US should be treated with skepticism.

Everything is in very early stages in the US program. But, as I mentioned a while back, the Russians have been looking at this technology for years. Dr. Vitaly N. Makukhin of the Trymas Center in Moscow has published papers on "Electronic equipment for complex influence on biological objects" which he claims can produce effects including "disorder of the autonomic nervous system." Few people have taken him seriously in the West before. Now that the same sort of effects are being confirmed in US labs, perhaps we will start taking more of an interest in what this type of weapon may be able to do.

In the post Cold War era, a new public campaign to close down the EMR bioeffects research effort is based on the premise that EMR bioeffects or health effects have not been conclusively demonstrated. The outcome is that EMR bioeffects research will be conducted for the most part as classified research, as it has since the 1960s. The public will continue to be unaware of the very classified EMR mind control weapons.

### **The EMR scientific research and weapons culture**

Largely unknown to the public, systematic tactics were used to successfully carry out the government cover story of only heating effects and no proven bioeffects from EMR. Eileen Welsome, Pulitzer prize-winning reporter and author of the 1999 book, *The Plutonium Files: America's Secret Medical Experiments in the Cold War* wrote about the atomic bomb scientific culture from the 1940s to the 1990s. The very same utilitarian culture is present in the Cold War and post Cold War EMR scientific culture and is documented in detail below. The methodical and systematic tactics were very successful in promoting the atomic bomb, preventing costly lawsuits that claimed health effects from radiation exposure, and questionably, protecting national security. Welsome's description

provided a key explanation for how the U.S. government national security science policy is actually carried out. Welsome wrote;

Many scientists couldn't accept the idea that they or their peers had committed any wrongs. They maintained their belief that the ends they had pursued justified the means they used, expressed little or no remorse for the experimental subjects, and continued to bash . . . the media for blowing the controversy out of proportion. . . . A few of the experiments increased scientific understanding and led to new diagnostic tools, while others were of questionable scientific value . . . [There was a] pervasive deception that the doctors, scientists, and military officials routinely engaged in even before the first bomb had been detonated. General Leslie Groves [head of the Manhattan Project to build the first atomic bomb] lied egregiously when he testified to Congress in 1945 about radiation effects of the bomb.

"A pleasant way to die," he said-fully aware of . . . [what happened to the Japanese victims and in a fatal laboratory accident.] Stafford Warren [director of the Manhattan Project's Medical Section] downplayed the fatalities and lingering deaths in Japan. . . . During the war, the bomb makers believed that lawsuits would jeopardize the secrecy of the project. After the war they worried that lawsuits would jeopardize the continued development of nuclear weapons . . . The weaponeers recognized that they would have to allay the public's fear of atomic weapons in order to keep the [US plutonium] production plants operating . . . This meant an aggressive propaganda campaign about the "friendly atom" and the suppression of all potentially negative stories about health hazard related to atomic energy . . .

AEC officials routinely suppressed information about environmental contamination caused by weapons plants . . . The fact is, the Manhattan Project veterans and their protégés controlled virtually all the information. They sat on the boards that set radiation standards, consulted at meetings where further human experimentation was discussed, investigated nuclear accidents, and served as expert witnesses in radiation injury cases.

### **Public awareness**

As shown below, a few new laws and treaties on EMR weapons have passed and this is another of many indications that EMR weapons are a real concern. Still, discussions have been crippled by secrecy, suppression of information and a lack of support.

In the case of EMR bioeffects research and EMR weapons development, the U.S. government controlled the research funding and a utilitarian EMR scientific culture enabled systematic scientific tactics to be carried out in order to maintain EMR weapons as one of the deepest secrets of the nation. As a result, the public is in the dark about the

next generation of powerful EMR weapons after the atomic bomb. But a small handful of outspoken critics like Becker, Brodeur, Adey, Slesin, Lopatin, Arkin and others have published hard to find information on EMR bioeffects science and weapons in the Cold War and now post Cold War era.

The government's cover story of the lack of proven EMR bioeffects has been the result of extensive and questionable government scientific tactics in the name of national security. Becker was right about an EMR Manhattan project. The U.S. government will never admit to government mind control weapons, although the tell tale signs are present. What EMR bioeffects are so important to merit this long history?

The U.S. military is not a reliable source of information on EMR mind control research and weapons because their primary goal is to protect national security. Where can the public go for reliable answers? Public input, debate, and government accountability and oversight are a part of the checks and balances in a democracy. For example, because reliable documented information on brain research and national security for the public is lacking, requests for a GAO or Government Accounting Office report on the new brain technologies and weapons could be requested from Congress.

### **No effective legal protections for nonconsensual secret experiments**

The public should also be very concerned because the development of the atomic bomb involved extensive nonconsensual human experimentation that was thought to be essential for protecting national security. A 1994 congressional hearing reported that "nearly half a million Americans were subjected to some kind of Cold War era tests," often without being informed and without their consent. The widely-held belief by Moreno and most experts is that secret mind control experiments couldn't happen today. It is true that experimentation law is well grounded in constitutional and international law. But effective laws have not been implemented despite past secret human experiment scandals including radiation experiments. Current federal regulations do not provide legal remedies for victims or punishments for intelligence agency scientists, although the department of defense has adopted better rules and regulations.

The current ineffective legal protections are caused in part by a very powerful but silent Cold War culture based on the belief that human experiments are the only feasible means to achieve essential national security goals. This culture overwhelms the majority consensus of advocates for human subject protections whose rhetoric is well-accepted but who fail or are unable to act in any meaningful way.

Given the strong consensus for protecting national security at all costs, it is highly likely that the current regulations will also prove ineffective in reality. For example, it is well documented that congressional laws were passed to retroactively eliminate government contractor liability for radiation experiments, court rulings were interpreted to severely limit government liability, and government lawyers and scientists suppressed scientific evidence of the health effects from exposure to radiation. The government won most legal

cases brought by victims. In past CIA mind control experiments, the CIA had the approval from the very top levels of government to use any means necessary and the CIA acted above the law. No one was punished and almost all victims of LSD experiments lost their legal battles. Moreno and most experts do not give any weight to this paradox.

### **A thorough, impartial investigation**

Moreno wrote that since writing his 1999 book *Undue Risk: Secret State Experiments on Humans*, he has received a huge volume of letters and calls from victims claiming nonconsensual government mind control experiments. So much so that Moreno wrote extensively of the problem in his new book *Mind Wars*. But Moreno made the very common mistake of not seeing beyond the 'crazy sounding' testimonies of alleged government mind control victims. Mainstream press and now Moreno and the neuroscience community have dismissed the claims as conspiracy theories without a thorough and impartial investigation. Moreno's did not present the required balanced debate needed to reach such an unequivocal conclusion. The public is left to ponder a complex and controversial issue with little hard evidence and Moreno's professional beliefs and opinions which lack sufficient supporting evidence. The fallacies and bias in Moreno's reasoning are too serious to disregard.

Moreno wrote that there is no evidence of ongoing government mind control experiments today. Sufficient hard evidence will always be lacking for this issue. Classified weapons programs are surrounded in government denials, disinformation and cover stories and predictably, a lack of hard evidence. It becomes irresponsible to wait for hard evidence or government admissions before investigating further.

Investigating claims of alleged illegal mind control experiments can be made in light of this little known and now more complete picture of the long history of international EMR bioeffects weapons research and the very successful and documented U.S. government methods, tactics and illegalities used in the development of EMR bioeffects weapons. The counterarguments to Moreno's reasoning and conclusion provide a solid basis for a call for a thorough impartial investigation. A 60 minute-style investigation is needed because of the growing numbers of mind control allegations. Based on these findings, much more research and information is called for.

## **The 2006 Government Mind Control Debate: book review of *Mind Wars: Brain Research and National Defense* by Jonathan D. Moreno**

**by Cheryl Welsh, director, Mind Justice, December 2006**

### **Section 1 Introduction: Nature magazine book review**

Cheryl Welsh is cited in *Mind Wars: Brain Research and National Defense* by Jonathan D. Moreno, Ph.D. On page *ix*, "Acknowledgements *Mind Wars* grew out of a wide variety of conversations and experiences. Among those who provide me with specific assistance on problems I confronted as I explored this largely uncharted territory were . . . [list of seventeen names including Cheryl Welsh]." For a book review, see *Nature*, Vol 443, 26 October 2006 page 911, *Battlefield Between the Ears* by Charles Jennings.

A generally positive *Nature* magazine book review described a few minor problems; "One weakness of the book is that Moreno's treatment of technical issues is sometimes superficial. . . . The book is a fascinating read despite these reservations, but it still left me wondering, is this stuff for real?" Moreno concluded that it is the nation to develop serious neuroweapons in the 21st century that will dominate. Jennings disagreed, citing the failure of technology fixes in the Iraq war. Jennings wrote; "It is not obvious how a new generation of brain-based weapons would represent more than an incremental gain." Moreno concluded classified mind control weapons do not seem to be advanced today.

Moreno's book is highly influential and will reach a wide audience. I highly recommend this fascinating account because it provided an extremely interesting overview of national security and brain science and contains new analysis and information. For the first time, a widely disseminated book included several references to government mind control allegations and a detailed, nonjudgmental evaluation. Most can agree that mind control weapons are classified but how advanced are they? Is mind control just science fiction and a conspiracy theory or the next weapon of mass destruction and one of the deepest secrets of the nation?

On page 107, Moreno wrote;

For years, I have corresponded with several very bright and highly functional people who are absolutely sure that at some time or another they have been the victim of mind control experiments by a government agency. Once I asked one of them if anything would alter her view about this; she acknowledged that probably nothing would, such is her certainty about her victimization by surreptitious forces. My own experience with

government-on the staffs of presidential advisory committees, in congressional testimony, and so forth-makes me doubt that such experiments could be kept quiet for decades. Our government just isn't that airtight. So I'm no conspiracy theorist.

He wrote that "there are thousands" who contact him because they believe they are victimized by government mind control experiments. Moreno believes they are "misguided" and many of them "associate their ideas with conspiracy theories."

Since the 1960s, the growing numbers of alleged victims have been stereotyped without further investigation in large part because the mind control claims sound so overwhelmingly like science fiction and symptoms of mental illness. Victims report remote dream and memory manipulation, hearing voices that nobody else can hear,(microwave hearing can create voices in the head and is a known military technology), remote control bodily functions or pain that can be turned on or off in an instant, in any part of the body, and more. Moreno followed suit and only superficially investigated the possibility of human surveillance beyond battlefield distances and advanced mind reading. National security and neuroscience are complex subjects and reliable information so necessary for a balanced viewpoint is scarce.

A serious investigation into government activity and national security areas would be necessary to come to a reliable conclusion on how advanced mind control weapons are likely to be and on the possibility of current clandestine mind control experiments. The counterarguments presented below challenge widely-held assumptions held by Moreno and most people. The counterarguments are more convincing than one would guess at first glance.

## **Section 2 Most genuine secrets ironically remain secret**

Moreno is addressing a sophisticated audience of neuroscientists about a very controversial topic, mind control. The *Nature* reviewer described the dilemma of a lack of reliable technical sources and an abundance of questionable information;

Some of the ideas discussed here -such as brain scanning at a distance, or memory augmentation through hippocampal implants- fall close to the fine line separating the visionary from the crackpot, and a more critical examination of the border territory would have been welcome. Moreno recognizes the outright nonsense as such, but an over-reliance on popular news stories rather than technical sources sometimes leads him to give outlandish ideas more credence than they deserve.

If the government had secret mind control weapons, the technical papers and scientific theories would be classified and the government's national security bully pulpit would disseminate rumors, disinformation and denials. Moreno did find extensive classified government-sponsored neuroscience research and he wrote about the disinformation

surrounding mind control weapons. Steve Aftergood, a highly regarded secrecy expert explained that excessive use of government cover stories is routine. In the Bulletin of Atomic Scientist article entitled, *The Soft-Kill Fallacy*, September/October, 1994, he wrote;

The government secrecy system as a whole is among the most poisonous legacies of the Cold War. . . . the Cold war secrecy system also mandates active deception. . . . A security manual for special access programs [SAPs] authorizes contractors to employ 'cover stories' to disguise their activities. The only condition is that 'cover stories must be believable'. Even the government is starting to recognize that official cover and deception programs are getting out of hand and need to be curtailed.

The cover story for mind control weapons seems to be that they are science fiction or don't work. For example, Jon Ronson, author of the 2005 New York Times reviewed book *Men Who Stare at Goats* wrote on page 53;

Colonel Alexander has been a special advisor to the Pentagon, the CIA, the Los Alamos National Laboratory, and NATO. He is also one of Al Gore's oldest friends. He is not completely retired from the military. A week after I met him, he flew to Afghanistan for four months to act as a "special advisor." When I asked him who he was advising and on what, he wouldn't tell me."

On page 200 of his book, Ronson wrote; "Colonel Alexander has spent a lifetime in the world of plausible deniability and I think he's got to the stage where he just trots these things out." Page 201 continues with a question to Alexander about frequencies and psycho-correction devices and he replied, "This is not something that has been brought up or addressed, and we have covered the waterfront of nonlethal technologies." "We are not warping people's brains or monitoring people or da da da da. It's just nonsense."

Here is a typical official government position. In the December 17-23, 2001 Defense News, , *Israel Fields Means to Suppress Palestinian Violence* Barbara Opall-Rome reported;

. . . In a Dec. 9 interview marking the close of his four-year term at the helm of Israel's formidable defense research and development sector, Ben-Israel, [Major General Isaac Ben-Israel] said his directorate explored different scientific and phenomenological fields-including mind control- in attempts to contain and deter terrorist activity. "We invested in this for a few years . . . but we determined that it was not effective," Ben-Israel said of mind control methods, many of which were developed by military and security agencies of the former Soviet Union.

Everyone can agree that if government mind control was an effective weapon, officials would never admit it. Since the break up of the Soviet Union, information on Russian mind control became available although as in the U.S., no government documents or proof of mind control weapons other than circumstantial evidence were ever publicly confirmed.

The public is not likely to find out about any possible advanced and classified government mind control programs. "Most genuine secrets ironically remain secret" explained William Arkin, a military weapons expert and author of the 2005 book *Code Names Deciphering U.S. Military Plans, Programs, and Operations in the 9/11 World*. His book was reviewed by the New York Review of Books. Arkin described the current secrecy system;

"As I have learned in compiling this directory, most genuine secrets ironically remain secret. . . . Yet Abu Ghraib is like every other national security surprise: We cannot know who the players are or what they are up to until after disaster strikes." Arkin listed disasters including ". . . domestic spying operations, illegal weapons developments, and human experimentation." Some nonlethal weapons like blinding lasers were classified at some of the highest levels of secrecy only because the weapons are repugnant. Arkin reported that all can agree there is a lack of effective oversight, particularly in Congress.

In a January 27th, 2005 Democracy Now interview, Arkin reported extensive government retaliatory actions for a book he wrote, even though it contained only unclassified information. Few experts are willing to write about classified research if there is a likelihood of government reprisals. Arkin stated;

"I wrote a book in the 1980's that revealed where all the nuclear weapons were around the world. The Reagan administration was not very happy about it and came down on me pretty hard. And --

Amy Goodman: How?

William Arkin: Well, they threatened to throw me in jail. And it took many months of negotiations with the Reagan administration to convince them that I had not used any access to classified information in order to compile that book. That was the key that they would have used as the excuse to put me in jail. So it took many, many months to do that. It was quite a hairy time.

The methods for keeping national security secrets out of the public eye have been well developed and are extensive. The May 3rd, 1992 Washington Post article by George

Lardner reported on a 1992 CIA report entitled *Greater CIA Openness*. Director Joseph DeTrani stated; " PAO [CIA's Public Affairs Office] now has relationships with reporters from every major wire service, newspaper, news weekly and television network in the nation," the report said. "This has helped us turn some 'intelligence failure' stories into 'intelligence success stories, and it has contributed to the accuracy of countless others." "In many instances," the report continued, "we have persuaded reporters to postpone, change, hold or even scrap stories that could have adversely affected national security interests or jeopardized sources and methods . . . "

Here is a more recent example. On the April 13, 2003, CSPAN Booknotes program, Philip Taubman, a New York Times editor stated;

. . . if you stumble or learn about something that's particularly sensitive, the government will sometimes come to news organizations. . . . They've done it with the Washington Post and they'll say please don't publish that and, on occasion, we will agree with that to protect the security of the country.

According to Daniel Ellsberg, a top Pentagon official, who leaked the Pentagon Papers in the 1970s, the successful keeping of secrets is a routine occurrence. Ellsberg commented that "thousands of insiders" know secrets. "But the fact is that the overwhelming majority of secrets do not leak to the American public." In Ellsberg's 2002 book *Secrets, A Memoir of Vietnam and the Pentagon Papers*, page 43, he explained;

It is a commonplace [belief] that "you can't keep secrets in Washington" or "in a democracy". . . . These truisms are flatly false. They are in fact cover stories, ways of flattering and misleading journalists and their readers, part of the process of keeping secrets well. . . . But the fact is that the overwhelming majority of secrets do not leak to the American public." . . . The reality unknown to the public and to most members of Congress and the press is that secrets [that] would be of the greatest import to many of them can be kept from them reliably for decades by the executive branch, even though they are known to thousands of insiders.

Neuroscientists who conduct secret research rarely discuss anything publicly. A Dana Press interview with Moreno posted at <http://www.dana.org/news/mindwars102406.cfm> explained;

In the book, there's some careful writing about talking to people and the source of your material. Were people unwilling to talk to you?

I really consider myself a member of the establishment, and I think by any fair measure I am, but I did find that -- unlike physicists whom I've spoken with about the social issues in nuclear physics, or these days, increasingly, biologists who worry about biosecurity -- people who work in

neuroscience, at least the people that I spoke to, were very reluctant to talk for the record. And I think there are a number of reasons for that.

Part of it is because scientists generally don't want to say something stupid and jeopardize a funding source. Part of it also is that some of them are working in "secured circumstances" -- they're not just working for DARPA, which is not a spy agency, but they're working for spy agencies and they didn't want to stumble and say the wrong thing. Part of it also is that, in general, scientists think they're the smartest guys in the room, and even believe that -- and I pretty much got this reaction from a couple of people -- "Well, this agency, I don't know what their goal is but they're funding important research that's going to help people and I don't think I'm doing anything that's going to be a problem downstream."

Weapons comparable to the atomic bomb are classified as the deepest secrets of the nation. The methods employed by the U.S. government to accomplish this goal are extensive. The numerous secrecy experts cited above illustrate how the deepest secrets of the nation are successfully kept under wraps. It is unlikely that the public will find out when the government has developed advanced mind control weapons.

### **Section 3 EMR mind control weapons: one of the deepest secrets of the nation**

Moreno does not write about the area of research in which mind control weapons would likely be found, i.e. the fifty year U.S. classified EMR weapons programs. Louis Slesin is the editor of the trade journal Microwave News. In a 1997 US News and World Report article entitled *Wonder Weapons, The Pentagon's quest for nonlethal arms is amazing. But is it smart?* Slesin wrote;

[T]he human body is essentially an electrochemical system, and devices that disrupt the electrical impulses of the nervous system can affect behavior and body functions. But these programs--particularly those involving antipersonnel research--are so well guarded that details are scarce. "People [in the military] go silent on this issue," says Slesin, "more than any other issue. People just do not want to talk about this."

Insiders were not willing to publicly discuss known but classified antipersonnel weapons research, an indication national security has and will effectively keep mind control weapons classified.

On page 113, Moreno wrote; "just because national security agencies are spending money on them doesn't mean they are a sure thing, but that's often enough to make conspiracy theorists feel vindicated." Generally speaking that is true but heavily funded and classified government programs running for over fifty years and based on sound general scientific theories are unlikely to be disinformation. The brief history and specific details given below differentiates the funding of serious mind control weapons from

disinformation. Mind control areas of research such as EMR weapons were known to be heavily classified since the 1960s.

Moreno and experts do write of numerous brain-related weapons research programs and that this research is heavily classified. Here is a secrecy expert reporting on a long running government weapons program. In the Bulletin of Atomic Scientist, September/October 1994, *The Soft-Kill Fallacy*, Steven Aftergood wrote; "Details about programs to develop so called "non-lethal "weapons are slowly emerging from the U.S. government's secret "black budget". . . . The concept of non-lethal weapons is not new; the term appears in heavily censored CIA documents dating from the 1960s."

Richard L. Garwin, IBM Fellow Emeritus at the Council on Foreign Relations (CFR) is a co-author of the 1999 and 2004 CFR nonlethal weapons reports. Garwin was a member of the JASONS, a high-level group of physicists, whose advice is usually classified and routinely sought by the Department of Defense. Garwin served on the President's Science Advisory Committee. He was named one of ten Founders of national reconnaissance by the National Reconnaissance Office (NRO), scientists who contributed to the founding of this space discipline. Garwin's views are more critical of nonlethal weapons and more informative than most and is representative of the government position on EMR weapons.

Garwin replied to email questions in January 2005 and concluded; ". . . I have evaluated electromagnetic signals for the Defense Department a number of times. Nevertheless, there are always "compartments" to which even people with high-level security clearances do not have access. . . . "

While nonlethal weapons became better known to the public in the 1990s, Garwin reported there were already developed and highly classified "large programs" in "psychological warfare, information warfare, and nonlethal weapons with strategic potential." Garwin co-authored the subsequent 2004 CFR report, *Nonlethal Weapons and Capabilities* which described the ongoing interservice conflicts, the problem of redundancy, a burdensome secrecy system and the lack of accountability for weapons. Here are a few critical excerpts from the reports, again illustrating significant government interest and very large, classified programs, contrary to Moreno's analysis.

The 1999 Council on Foreign Relations, (CFR) report entitled, Non-Lethal Technologies: Progress and Prospects illustrated the already developed and very large classified programs that include neuroscience and nonlethal weapons. The 1999 report is available on the CFR website at <http://www.cfr.org/> Thanks to Harlan Girard of International Offensive Against Microwave Weapons for this information. First, the 1999 CFR report excerpt;

Once developed, these weapons [NLW or nonlethal weapons] must be deployed coherently, in synergistic coordination with information/psychological warfare technologies and conventional weaponry. Finally, various NLW programs dispersed throughout the

individual services should be coordinated by the existing Joint Nonlethal Weapons Directorate (JNLWD). . . .

And until January 1999, the directorate essentially had no access to joint programs in information warfare or psychological warfare. Nor did its brief extend to Air Force and Navy programs in nonlethal weapons. To reduce barriers between the Joint Nonlethal Weapons Directorate and what are said to be 'large programs' in psychological warfare, information warfare, and nonlethal weapons with strategic potential, a so-called insight program was established. As a result, a few individuals in the directorate now have an overview of these programs. . . .

Recommendations . . . 5. Department of Defense policy for nonlethal weapons is inadequate in practice. The substantial barriers that exist between the Joint Nonlethal Weapons Directorate, with its focus on research and development for tactical applications, and the apparently larger Air Force and Navy classified programs constitute an impediment to the desired single, optimum nonlethal weapons program that is required to exploit the full potential of these weapons and that is mandated by Congress. . . .

In a Memorandum of Agreement (MOA) adopted June 23, 1999, the services agreed to "coordinate and integrate the development of all nonlethal weapon programs and activities through the DOD nonlethal weapons Executive Agent." While this seems to be progress, the new MOA codifies restrictions-e.g., "insight, not financial oversight"-and limits access-e.g., "monitor status of service-unique programs through annual status briefings from the responsible service.

The 2004 Council of Foreign Relations report, *Nonlethal Weapons and Capabilities* is posted here; <http://www.cfr.org/>. Page 19 of the 2004 Report of an Independent Task Force Sponsored by the Council on Foreign Relations, entitled *Nonlethal Weapons and Capabilities* recommended that skilled engineers and scientists work on directed energy, electromagnetic coupling, modeling and physiology. Page 21 described the lack of access to classified programs such as cyber warfare, electronic and communications warfare, although the legislative mandate required access. Page 25 discussed already existing and much larger classified programs in the individual services that were not accessible to current nonlethal weapons development programs. Page 36 described the recommendation that more access to classified programs be made available so that coordination can take place and redundancy can be avoided.

A 1979 Washington Post article reported that a supersecret CIA mind control program bigger than MKULTRA went on into the 1970s. One of the most influential U.S. scientists, Dr. Edwin Land is best known for his highly successful but classified work on satellite cameras. He also conducted 1960s and 70s CIA mind control research. The NRO recently honored Land, like Garwin, as one of the ten Founders of national

reconnaissance. An imagery intelligence expert, Land chaired the Intelligence Subcommittee of the Technology Capabilities Panel. As Chairman of the President's Science Advisory Committee Intelligence Panel, he advised the NRO on new and existing overhead systems.

The CIA's infamous mind control programs and experiments were revealed in 1970s congressional hearings. Classified mind control research took place in over eighty institutions, such as UCLA, MIT, Stanford and Harvard. A January 29, 1979 Washington Post article reported that classified mind control research continued under the direction of Land. The article was entitled *Book Disputes CIA Chief on Mind-Control Efforts: Work Went on Into 1970s, Author Says*;

Despite assurances last year from Central Intelligence Director Stansfield Turner that the CIA's mind-control program was phased out over a decade ago, the intelligence agency has come up with new documents indicating that the work went on into the 1970s, according to a new book. John Marks, the author of the book, said the CIA mind-control researchers did apparently drop their much publicized MK-ULTRA drug-testing program. But they replaced it, according to Marks, with another supersecret behavioral-control project under the agency's Office of Research and Development.

The ORD program used a cover organization set up in the 1960s outside Boston headed by Dr. Edwin Land, the founder of Polaroid, who acted as a "figurehead," said Marks in his book. The project investigated such research as genetic engineering, development of new strains of bacteria, and mind control. The book identifies the Massachusetts proprietary organization headed by Land as the Scientific Engineering Institute. The CIA-funded institute was originally set up as a radar and technical research company in the 1950s and shifted over to mind-control experiments in the 1960s with the exception of a few scattered programs. According to Marks, however, the ORD program was a full-scale one and just as secret as the earlier MK-ULTRA project. . . .

In a March 14, 1987, Nation magazine editorial, Louis Slesin, editor of Microwave News, wrote; "Experts agree that nonionizing electromagnetic radiation (NIER) can affect behavior, but the question is whether the radiation can be harnessed and used on people at a distance. With its MKULTRA program the C.I.A. began looking for the answer in the early 1950s."

Slesin described the 1979 book, *Search for the Manchurian Candidate* by John Marks and that Marks filed a freedom of information act (foia) request. The CIA replied that "it had a roomful of files on electromagnetic and related techniques to alter behavior and stimulate the brain." But, "[t]he agency refused to release the papers, and they remain

classified." Mind Justice made a similar foia request and the CIA would not release the papers.

There are also more obscure signs of the likelihood of secret government mind control programs. For example, in the November 1990 International Review of the Red Cross, Louise Doswald Beck and Gerald Cauderay wrote about international EMR weapons development. Even though the research is heavily classified, the authors came to a reliable conclusion about the weapons. This is the interpretation by experts that the public needs to know but was absent in Moreno's analysis.

Research work in this field [EMR weapons] has been carried out in almost all industrialized countries, and especially by the great powers, with a view to using these phenomena for anti-materiel or anti-personnel purposes. . . . In spite of the rarity of publications on this subject, and the fact that it is usually strictly classified information, research undertaken in this field seems to have demonstrated that very small amounts of electromagnetic radiation could appreciably alter the functions of living cells.

Here is another example. As reported in the August 15, 1994 Aviation Week and Space Technology by William Scott, "An industry scientist said that the Army's Research Institute worked on a variety of "neurotechnologies" in the mid-1980s, ostensibly abandoning the program--although there are indications to the contrary. Since these activities were classified, military officers will not comment on the success or failure of such programs." An educated guess can be made, but Moreno is unconvinced and wrote that one cannot be sure what is classified. Moreno does not err on the side of caution in a situation that calls for an awareness of the conflict between national security and democratic principles. Moreno's skepticism that these are advanced mind control programs is debatable.

**Section 4 Mind control is controversial and would be a very classified weapons program: "vigorous protection of one nonnegotiable premise" - freedom of thought**

Mind control and human surveillance technologies are 'red button' issues. Moreno explained on page 176;

[a] number of the scientists, lawyers, ethicists, and advocates with whom I spoke in the course of writing this book agreed that there had to be vigorous protection of at least one nonnegotiable premise when considering the appropriate security applications of neuroscience. In terms of the law, this principle might be expressed in terms of the protections afforded in the Fifth Amendment of the Constitution regarding self-incrimination; "to be a witness against himself." Philosophically, this can be expressed as the proposition that no one else should be able to decide what goes into my brain or who "reads" it.

But Moreno doesn't examine the consequences. At the least, if or when the development of advanced mind control weapons takes place, it is hard to imagine any scenario that would survive public outcry. A likely government choice to protect national security would be to develop the weapons as one of the deepest secrets of the nation, surrounded in rumors, disinformation and government denials.

### **Section 5 'Misguided' or real: government mind control victims**

Moreno's book was written to suggest neuroscientists do a better job at educating the public about neuroscience and to consider the ethical implications of their research. It becomes clear why Moreno spent a large part of his book on government mind control allegations and debunked the claim of secret advanced government mind control programs. Moreno warned of the problem that neuroscientists will face in carrying this out; thousands of alleged mind control victims will contact them with letters and calls which the experts won't want to be associated with because it makes their research harder to take seriously.

Moreno does not see the mind control claims as a human rights issue. He does not accept the possibility that mental illness could be a government cover story for illegal mind control experiments. Like most people, he assumed that alleged mind control victims must be 'misguided' or mentally ill for two compelling reasons; many of the victims act and sound like mentally ill people. Secondly, the claims sound fantastical, bizarre and a large number include testimony involving conspiracy theories. Moreno, as with most people, never gets past the assumption of 'misguided' or mentally ill, especially given that his father was a famous psychiatrist. In a Dana Press interview, Moreno explained his viewpoint;

So I have a feeling this is going to change when Mind Wars comes out. I also have a feeling that a lot of people aren't going to be very happy with me.

Why do you say that?

People in bioethics are supposed to be gadflies. We're supposed to point out what's going on. And it's hard to do that without looking like you're playing gotcha. So I kind of bent over backwards in the book not to do that. That's not what I'm interested in doing.

Also, there is a big subculture that believes that their brains are being manipulated by insidious forces. Just today I got an email from somebody who is one of these folks who believes that mind control is going on right now and has been since the Sixties. And I'm sure that many neuroscientists do not want to touch that with a 10-foot pole; they don't want to be identified with any of that stuff. It just makes it a little harder to be taken

seriously and it makes it important to be as careful as you can about the way you describe what's going on.

Victims do not have proof of their claims. Victims have been unable to obtain classified government documents. They have been unable to convince experts of their claims and to hire experts for advanced monitoring or shielding for the alleged EMR signals used on them.

Many victims don't speak out. A few of the alleged victims are mentally ill. The mind control technology could be very advanced and yet unknown and fantastic sounding to the public. And if the allegations are true, articulating a personal experience of targeting by remote and advanced technology would sound bizarre, 'crazy', like a 'nut case with delusions of persecution' or resemble science fiction. But here is a 2004 U.S. Air Force (USAF) document that sounds like science fiction and provided a striking match to victim allegations. The doctrine included "Controlled Effects", a military description of EMR weapons as soon as 2020-2050. Notable is the description of remote human targeting of "Controlled Personnel Effects" anywhere in the world via satellite.

The USAF is already funding the "Controlled Effects" research and stated the goals can become a reality. The document was authored by USAF chief scientists, taking it out of the realm of science fiction and conspiracy theory. The doctrine included this statement; "With the advent of directed energy and other revolutionary technologies, the ability to instantaneously project very precise amounts of various types of energy anywhere in the world can become a reality." According to conventional wisdom, classified research is approximately twenty years ahead of unclassified research, another factor in favor of the victim allegations. Here is the full USAF document.

#### *Long-Term Challenges*

*Fourth in a Series of Articles Addressing Long-Term Challenges from the Air Force's Air Power Theory and Doctrine.*

AFRL's Directed Energy Directorate, Kirtland AFB NM, and Munitions Directorate, Eglin AFB FL

Dr. William L. Baker (Chief Scientist) and Dr. Eugene J. Bednarz, of the Air Force Research Laboratory's Directed Energy Directorate, and Dr. Robert L. Sierakowski (Chief Scientist), of the Air Force Research Laboratory's Munitions Directorate, wrote this article.

For more information contact TECH CONNECT at (800) 203-6451 or place a request at <http://www.afrl.af.mil/techconn/index.htm>. Reference document DE-04-01. Article posted at; <http://www.afrlhorizons.com/Briefs/Jun04/DE0401.html>

## Controlled Effects

### Scientists Explore the Future of Controlled Effects

The long-term challenges, formulated as part of the Air Force Science and Technology (S&T) Planning Review, sought to determine the capabilities that the Air Force would need in the 2020 to 2050 time period. The identified capabilities needed to address compelling requirements of the Air Force. They are intended to be high risk endeavors with high payoffs, difficult to attain but probably achievable, and not necessarily linear extensions of ongoing technology development programs. One of the long-term challenges developed as a result of this effort is Controlled Effects.

The Controlled Effects challenge envisions the ability to tailor and deliver the most appropriate type and amount of energy onto targets of military significance to create a particular desired effect. Certainly, military capabilities in this general area have improved through the application of advanced technology research and development. Long-range bombers can strike anywhere on the earth in a matter of hours and have the capability to deliver devastating power. Moreover, laser and Global Positioning System/ inertial guided weapons have demonstrated unprecedented precision during recent military conflicts. The Controlled Effects challenge focuses on new and revolutionary technologies to significantly enhance these capabilities and determine how these technologies could change the face of military conflict over the next 20 to 50 years.

With the advent of directed energy and other revolutionary technologies, the ability to instantaneously project very precise amounts of various types of energy anywhere in the world can become a reality. The Controlled Effects long term technology challenge embodies this vision. Targets of military significance include facilities and equipment, personnel, and communications and information systems. Military commanders want to inflict effects that can be either lethal or nonlethal, and they can be either very localized or dispersed in nature. In general, if it becomes possible to instantaneously put warning energy spots on any target worldwide and then rapidly follow this warning with varying levels of effects, the military commander would possess unparalleled operational flexibility and response. The end result is a significantly enhanced conventional deterrence.

The Controlled Effects long term challenge focuses technology developments in three primary areas (see figure). Measured Global Force Projection looks at the exploitation of electromagnetic and other nonconventional force capabilities against facilities and equipment to

achieve strategic, tactical, and lethal and nonlethal force projection around the world. Controlled Personnel Effects investigates technologies to make selected adversaries think and act according to our needs. Dominant Remote Control seeks to control, at a distance, an enemy's vehicles, sensors, communications, and information systems and manipulate them for military purposes. The S&T Planning Review panel looked first at extending the applications of advanced military technologies currently under development and then at new, revolutionary technologies for their military significance.

Within the Measured Global Force Projection capability, the panel investigated the potential for using electromagnetic and other nonconventional force capabilities to achieve strategic, tactical, lethal, and nonlethal force projection. The electromagnetic spectrum includes lasers, high-power microwaves, and particle-beam weaponry. Nonconventional weapons included loitering micromunitions, variable effects munitions, and environmental energetics. Lasers and high-power microwaves represent the majority of technical research in the directed energy arena, and each has its own set of advantages. Laser weapons are capable of putting a small, very high intensity, very hot spot of light on a target, causing structural damage. High-power microwaves, on the other hand, generally flood target areas with radiation to cause electronic disruption and destruction. By varying the output power, both are capable of graduated effects from denial and disruption of operations at low power to destruction at high power. Both travel at the speed of light, so the effects are nearly instantaneous. Particle beams are another form of directed energy. Particle beam weapons accelerate atomic or subatomic particles, such as electrons or protons, to form high-energy beams. These beams of accelerated particles penetrate to the interior of the targets, causing damage or destruction through a combination of ionizing radiation, shock, and heating.

In the nonconventional arena, loitering micromunitions take advantage of very small-scale combinations of sensing, tagging, and damage mechanisms

integrated into units that can be very inconspicuous. Micromunitions will be very small-less than a 6-inch wingspan-and can be equipped with a suite of cameras and two-way communications. They would have the ability to operate surreptitiously in a particular environment and then be called into action when needed to provide target location information, tag targets of interest, or cause required damage. Another concept is variable effects munitions or 'dial-an-effect' weapons. These take advantage of ultrahigh- energy-density materials known as nanoexplosives or, in the very long term, antimatter. Scientists envision variable effects munitions that can accurately deliver an optimal lethality to a broad range of targets.

The effects can vary in the type of damage mechanism (e.g., blast/fragment, thermal, or electromagnetic pulse) as well as the magnitude of the energy deposited on the target so that it will be just enough to defeat the target while minimizing collateral damage. And lastly, environmental energetics looks at the possibility of controlling the forces of nature on a local basis to enable the warfighter to disrupt an adversary's operations. A common nonmilitary example of this is cloud seeding to produce rain, but taking this a step further for military applications might include the initiation of lightning to disrupt communications or destroy electronic systems.

For the Controlled Personnel Effects capability, the S&T panel explored the potential for targeting individuals with nonlethal force, from a militarily useful range, to make selected adversaries think or act according to our needs. Through the application of nonlethal force, it is possible to physically influence or incapacitate personnel. Advanced technologies could enable the warfighter to remotely create physical sensations such as pressure or temperature changes. A current example of this technology is Active Denial, a nonlethal counterpersonnel millimeter wave system that creates a skin heating sensation to repel an individual or group of people without harm.<sup>1</sup> By studying and modeling the human brain and nervous system, the ability to mentally influence or confuse personnel is also possible. Through sensory deception, it may be possible to create synthetic images, or holograms, to confuse an individual's visual sense or, in a similar manner, confuse his senses of sound, taste, touch, or smell. Through cognitive engineering, scientists can develop a better understanding of how an individual's cognitive processes (pattern recognition, visual conditioning, and difference detection) affect his decisionmaking processes. Once understood, scientists could use these cognitive models to predict a person's behavior under a variety of conditions with the potential to affect an adversary's mission accomplishment via a wide range of personnel effects.

As technology has advanced over recent years, most, if not all, systems are controlled by, or include, some form of computer or electronic components. Within the Dominant Remote Control capability, the S&T panel investigated the remote manipulation of adversarial electronic systems to control vehicles, sensors, communications, and information systems. In one scenario, the vision is to take control of enemy offensive and defensive military systems (a spacecraft, aircraft, or ground vehicle) and use them to our advantage. It might be possible to either confuse enemy systems so they would be unable to successfully perform their mission or to take control of enemy systems and remotely manipulate them. In another application, the control and manipulation of an adversary's

s communications and information streams would cause confusion or provide false information. The ability to disrupt or degrade an adversary's computers and information systems could render them inoperable or insert false information which, in turn, would significantly impair the enemy's ability to communicate. If our military commanders could achieve this dominant remote control capability, all aspects of the enemy's operations in the battlefield could be controlled to our advantage.

Within the Controlled Effects long term challenge, the S&T panel investigated the ability to tailor and deliver the most appropriate type and amount of energy onto targets of military significance to create a desired effect. Scientists are currently developing technologies to enable a number of first-generation applications. These include high-energy lasers, highpower microwaves, micro air vehicles, and some forms of antipersonnel systems. Others, like sensory deception and environmental energetics, are truly futuristic and require a great deal of research and development for far-term applications. Scientists will have to overcome technological hurdles, such as the production and storage of antimatter, the ability to propagate sensory information, or the ability to harness and extract energy from the environment, before these science fiction concepts will become reality. The technologies and applications described within the Controlled Effects long-term challenge will revolutionize the face of military conflict in the coming century.

Dismissing victims as crazy is not new. The August 31, 1997, New York Times Magazine article *Atomic Guinea Pigs*, discussed radiation experiment victims who were labeled "the crazies" by the Department of Energy officials until declassified government documents proved otherwise. Past illegal and unethical radiation experiments illustrate that the U.S. government is capable of wide scale, long-term, inhumane treatment by trusted officials.

The 2002 scandal involving Catholic priests sexually molesting young boys is analogous to mind control experiments and is a persuasive case of how terrible acts can be kept secret for years by a great and trusted organization. Many top Catholic officials kept the sexual molestations secret for years. See December 31, 2002, Los Angeles Times, *Molestation Scandal Wrenched Church Hierarchy and Faithful*. The sexual molestations took place for decades, on a large scale and were called "the greatest scandal in the history of the American Catholic Church." The molestations were not known by the public because the policy of the Catholic church was to ignore the problem. Surrounded by the denials of Catholic officials, the charges were unbelievable, horrific and extremely difficult to prove. Finally, widespread media coverage forced the very reluctant church in Rome to address the scandal. Mind control victims are in a similar situation.

The disclosure of the tobacco industry's decades-long knowledge of the health risks of smoking and its addictive nature is also analogous to mind control experiments. Tobacco company officials at the highest levels condoned and contributed to the tobacco deaths of smokers while at the same time, making billions of dollars for over half a century. In 1994, top officials lied under oath to Congress stating they didn't believe cigarettes were addictive or caused cancer. Tobacco company documents contradicted their testimony.

In the information age, inhumane, even horrific acts and the complicity of the many silent bystanders does occur. Mind control experiments could happen today. The thousands of victims that contact Moreno are for the most part, alleging very advanced mind control EMR weapons targeting and Moreno completely rejected this viewpoint. The main lesson from this book for Mind Justice is to change the focus on how to work on this issue. A better strategy may be to work on gathering hard evidence such as detecting the alleged advanced electromagnetic signals used on victims to prove mind control allegations and to call for a thorough, impartial investigation.

### **Section 6 No thorough or impartial investigations**

Jon Ronson's 2005 book, *Men Who Stare at Goats* is an entertaining yet unsettling examination of the serious issues in the mind control debate. Ronson interviewed military experts who say there are no advanced mind control weapons, just claims of nonsense and science fiction. Ronson guardedly concluded mind control weapons are possible, given that mind control patents have been bought up by the U.S. government. Ronson reported on allegations of mind control experiments by Guantanamo detainees and Iraqi prisoners of war and concluded we don't know whether advanced mind control weapons really work although mind control research is known to be classified.

At a book talk, Ronson described alleged mind control experiments in Guantanamo and Iraq. April 14, 2005, Politics and Prose book store, Washington DC. Available from C-span, Book TV at [www.booktv.org](http://www.booktv.org). Videotape # 186334;

. . . But what you see is all these nonlethal technologies. You see all these kind of nutty ideologies. All battling for supremacy like a kind of casserole of ideas -outside the church of Waco. And from the former detainees from Guantanamo Bay that I've interviewed it seems exactly the same things are going on there. I said to a man called Jamal al-Harith how do you feel, you know how did you feel at Guantanamo Bay and he said "I felt like a laboratory rat." And he said, "I felt they were trying stuff out on me."

And we know that the history of the army- in this room is Eric Olson whose father was victim to two of these think-tank ideas- one known as MK-ULTRA, [with the drug, LSD used on unsuspecting victims] . . . and another think-tank program called Artichoke, [involving the injection of heroin]. . .

. . . And one example is with Barney the purple dinosaur. When it was announced a year ago that they were rounding up prisoners of war in Iraq and blasting them with Barney the purple dinosaur, it was treated as a funny story, because, by all the major news networks in America, you know. . . the torture wasn't that bad. . . It was disseminated as funny because who wants to replace a funny story with, as Eric [Olson] once said to me, with one that's not fun.

. . . I was given seven photographs of a detainee who had just been given the Barney treatment as they called it. It was 48 hours of Barney with flashing strobe lights inside a shipping container in the desert heat. I mean this was the funny story of the war. [Ronson reads from his book] OK, So this is the description with the photograph of the man who had just been given the Barney Treatment. . . But I can say this. In the last photograph he is screaming so hard it almost looks as if he is laughing.

. . . The current chief of staff of the Army is a man called General Pete Shoemaker. . . He's well known to have an interest in these paranormal esoteric military pursuits. . . So now is the time when I know that these ideas go to the very top [levels of the military].

. . . One of the things you spoke of, the one that I have knowledge of is the frequencies. You can follow a trail of patents like footprints in the snow and the patents sometimes vanish into the world of military classification. And there's many patents bought up by a man called Dr. Oliver Lowry. . . . So we know that these patents have been bought up by the military. . . . And the detainees of Guantanamo I've spoken to speak of being blasted with frequencies, put inside music, high and low frequencies, masked with music.

. . . I think there's no doubt they're experimenting with this stuff. To add to that controversial suggestion. I think there's a good chance that even though they're trying this stuff out, it's not necessarily true that it works. A lot of this stuff doesn't work. This may or may not work. I don't know.

Tony Collins, author of the 1991 book *Open Verdict, An Account of 25 Mysterious Deaths in the Defense Industry* described plausible mind control allegations and an investigation that was never publicly solved. Tony Collins is executive editor of Computer Weekly. He worked for the BBC and national newspapers, such as Sunday Mirror. Twenty five Star Wars Marconi defense workers mysteriously died by suicide and strange accidents in the early 1980s in England. Collins wrote, "This book is about a new type of war, electronic war. . . . It is fought by . . . research students in universities and electronics engineers working for defense contractors. . . . It is a war that must be waged

constantly during peacetime to maintain the upper hand. It is a war that must be waged in secrecy." Collins reported;

The companies and establishments where they worked are reluctant to give out details of any projects, even those already in the public domain. In addition, there are many other project, so called 'black' projects, which these organizations cannot even officially admit to. The secrecy surrounding the peacetime preparations for a future electronic war ensures that any attempt to prove or disprove a definite work link can be not more than a calculated stab in the dark.

. . . In May 1989, for example, eleven Russians and four Czechs were expelled from the UK for allegedly trying to obtain highly sensitive information about powerful microchips, radar, laser technology and advanced materials such as titanium and carbon fibers. These agents were reported to have approached the executive of defense contractors in a series of 'cash for secrets' deals. . . . Another theory . . . concerns the investigation into alleged fraud at Marconi. . . . This investigation [by the Ministry of Defense Police] has since resulted in charges being brought, . . . . However there is not one scrap of evidence to suggest that any of the scientists named in the book were involved in fraud. . . . the deaths and disappearances of 28 defense workers is one of the most bizarre and enigmatic stories of the past decade."

### **Section 7 An old scientific con game: if there is no scientific theory then there are no proven health effects**

Several times in the book, Moreno dismissed the possibility of advanced mind control weapons because of the widely held belief that there is no generally accepted brain theory or worldwide consensus on how the brain works. On page 25-26 he wrote;

The process for manufacture of the atomic bomb is the classic example of science conducted in secret: the most important and highly classified scientific secret in history stayed secret only about four years, until the Soviets exploded their own device in 1949. For all the imagined and actual espionage activity around the bomb, competent physicists only had to study the published literature to get the main ideas.

### **Published literature contains notable EMR theories**

The first counterargument to Moreno's claim is that there are notable EMR theories that form the basis for EMR mind control weapons. In 1939, a Nobel prize winner, I.I. Rabi did study the published literature and made an important discovery. Russian scientists were reporting similar EMR research at about the same time. The December 29, 1939

New York Post article *We're All Radio Stations, Columbia Scientists Reports, All Atoms, in Humans or in Steel, Found to Emit and Receive Long Waves* described Rabi's discovery;

Columbus, Ohio, Dec. 29 (AP).--Every living thing on earth is a radio broadcasting and receiving set unconsciously sending out and receiving long-wave wireless messages.

Professor L L Rabi, Dr. P. Kusch and Dr. S. Millman of Columbia University told the American Association for the Advancement of Science today that all atoms, whether part of the heart tissue of man or a piece of steel, constantly emit radio waves which can be detected and measured.

Even death of an animal organism does not mean the stopping of activity, they said, since the atoms which form part of the living cell continue to emit radiation after the organism as a whole has ceased to function.

The Columbia scientists measured these radio waves from atoms for the first time and found them similar to the action of visible light, though the waves are much shorter and can be detected only by delicate apparatus. The method was used also in exact studies of the nucleus of the atom.

All nuclei of atoms and the particles which surround them spin much like a toy top. The spinning is irregular, the particles of the atoms jumping with the speed of light from one point to another. "The radio waves which we have studied are emitted when the atoms pass from one of these states to another," they said.

In their experiments, the Columbia scientists measured these radio waves with an accuracy 10,000 times better than has ever before been achieved, by shooting particles of atoms at high speed between two magnets.

Rabi is one of nine scientists described in the 1996 book *The Pioneers of NMR and Magnetic Resonance in Medicine: the Story of MRI* by James Mattson and Merrill Simon, Bar-Ilan University Press. The book jacket stated, "Rabi played a key role in propagating the "new physics" [new quantum mechanics] to his American colleagues. His 1937 discovery of magnetic resonance in molecular beams earned him the 1944 Nobel Prize in physics for his resonance method or radiofrequency spectroscopy.

In 1926, V.I. Vernadskii, called the father of the Soviet Bomb stated;

Only a few of the invisible radiations are known to us at presently. We have hardly begun to realize their diversity and the scrappy nature and inadequacy of our knowledge of the radiations which surround us and pass

through us in the biosphere, and to understand their basic roles in the processes going on around us, a role which is difficult to comprehend by minds accustomed to other conceptions of the universe." "We are surrounded and penetrated, at all times and in all places, by eternally changing, combining and opposing radiations of different wavelengths- from ten millionths of a millimeter to several kilometers.

A.G. Gurvich, founder of a leading Soviet school of biophysics was conducting EMR research in Russia in 1920s and 30s. Vernadsky worked with Gurvich. Vernadsky quotes were used in Russian scientific journals. A famous Russian military slogan based on Vernadsky's work was "He who controls the entire electromagnetic spectrum will dominate the world."

Rabi was chairman of the original Science Advisory Committee from 1953 to 1957 and a member of the Presidential Scientific Advisory Committee (PSAC) until 1968. He was assistant director of the MIT radar lab and worked on classified radar research during WWII. An article by Allan A. Needell entitled *I.I. Rabi, Lloyd V. Berkner and the American Rehabilitation of European Science, 1945-1954* stated; "Following the war, Rabi, with J. Robert Oppenheimer, was among the most influential participants in the debate over the control of postwar American atomic energy policy." The article continued;

[Rabi was ] chairman of the "Scientific Adviser to the Policy Council" of the Pentagon's Joint Research and Development Board (JRDB). Among its duties was to advise the service secretaries (after 1948 the secretary of defense) on issues of long-term planning as well as the implications of scientific and technological advances for military strategy." The advisers assisted the founders of the Central Intelligence Group (forerunner of the CIA) in staffing a scientific intelligence branch.

The scientists in the 1940s up to the present have been strategizing on national security. Top US scientists from the 1940s were monitoring scientific discoveries and no doubt knew of Russian developments of EMR technology. Needell's article continued;

In January 1949 President Truman formally approved National Security Council Intelligence Directive 10 (NSCID), which assigned to the Department of State "primary responsibility for the collection abroad for all government agencies of information in the basic sciences." Lloyd Berkner was named to direct a detailed study of science-related organization in 1949. Berkner began a survey of the "International Flow of Scientific Information" and enlisted the National Academy of Sciences (to which he had recently been elected) and its government service arm, the National Research Council. Berkner appointed Rabi to an advisory committee. Detlev Bronk selected Rabi to serve on the National Research Council Committee (NRC). "The NRC committee quickly endorsed

establishing and staffing science missions in major foreign embassies throughout the world.

Needell continued;

The Berkner Report was devoted to advance American national security interests. Berkner remarked in 1950 that " while the unclassified portion [of the recent report] has been designed to stand alone, it should be considered as a cover for the classified section. Although the secret section to which he referred cannot be located in State Department files, Berkner hints that science could be profitably tapped to accomplish the political goals of the United States and that "according to his proposal, the State Department would have a [scientifically knowledgeable] 'staff' or a monitoring function in relation to [our] diverse interests. Berkner explained, he meant that, while traveling, scientists could be briefed prior to their departure and debriefed upon their return. "The debriefing," he emphasized, "should be handled carefully by scientists in such a way as not to suggest that the information is to be used merely in the nationalistic sense.

Needell's article concluded that;

Berkner and Rabi remained close associates on matters of national security for years to come. Each contributed to important studies for national security agencies. Instead, many scientists became concerned with promoting their influence within the U.S. government and, more generally, building an institutional framework for cooperation between government and outside experts. More fundamental was the deep commitment of American scientists to working, often in secret, for the government.

The renown physicist Freeman Dyson, described a general mind control scientific theory for decades into the future. The theory also contained the basic ideas put forth by I.I. Rabi. Dyson was a member of the JASONS, a high-level group of physicists, whose advice is usually classified and routinely sought by the Department of Defense. Dyson explained that his theory is not science fiction. He wrote, "there is no law of physics that declares that such an observational tool [to transmit reports of neural events to receivers outside] to be impossible." This raises doubts about Moreno's unwavering conclusion.

Dyson commented in an article in the April 25, 1997 International Herald Tribune Book Review, *Imagined Worlds*, by Rudy Rucker; "After the organization of the central nervous system has been explored and understood, the way will be open to develop and use the technology of electromagnetic brain signals." Dyson described his mind control theory in the 1997 book, *Imagined Worlds*;

. . . The chief barrier to progress in neurophysiology is the lack of observational tools. To understand in depth what is going on in the brain, we need tools that can fit inside or between the neurons and transmit reports of neural events to receivers outside. . . . observing instruments. . . with rapid response, high band-width and high spacial resolution. . . There is no law of physics that declares that such an observational tool to be impossible.

We know that high-frequency electromagnetic signals can be propagated through brain tissue for distances of the order of centimeters. We know that microscopic generators and receivers of electromagnetic radiation are possible.

We know that modern digital data-handling technology is capable of recording and analyzing the signals emerging from millions of tiny transmitters simultaneously. All that is lacking in order to transform these possibilities into an effective observational tool is the neurological equivalent of integrated-circuit technology. We need a technology that allows us to build and deploy large arrays of small transmitters inside a living brain, just as integrated-circuit technology allows us to build large arrays of small transistors on a chip of silicon.

. . . Radioneurology is in principle only an extension of the existing technology of magnetic resonance imaging, which also used radio-frequency magnetic fields to observe neural structures. A rough estimate based on the available band-width indicates that a million transmitters could be monitored through each patch of brain surface with size equal to the radio wave-length.

This article described EMR mind reading and injecting thoughts via EMR signals as "grounded in current science." This research was funded by intelligence agencies and NASA and portions of the research were classified as secret by the U.S. government. The research was based on Rabi and Dyson's general theories. The details of an EMR mind control theory are almost certainly classified, an option that Moreno did not write about. U.S. News and World Report, January, 3 2000, *John Norseen, Reading and changing your mind*;

[Lockheed Martin neuroengineer in Intelligent Systems Division]  
Norseen's interest in the brain stems from a Soviet book he read in the mid-1980s, claiming that research on the mind would revolutionize the military and society at large. [He] coined the term "Biofusion" to cover his plans to map and manipulate [the brain] leading to advances in . . . national security . . . and . . . would be able to convert thoughts into computer commands by deciphering the brain's electrical activity.

BioFusion would reveal the fingerprints of the brain by using mathematical models, . . . It sounds crazy, . . .

The National Aeronautics and Space Administration, the Defense Advanced Research Projects Agency, . . . have all awarded. . . research contracts to Norseen. Norseen is waiting to hear if the second stage of these contracts-portions of them classified- comes through. Norseen's theories are grounded in current science. . . . By MRI, scientists can tell what the person was doing at the time of the recording. . . . Emotions from love to hate can be recognized from the brain's electrical activity. . . .

Norseen predicts profiling by brain print will be in place by 2005. . . . Norseen would like to draw upon Russian brain-mimicking software and American brain -mapping breakthroughs to allow that communication to take place in a less invasive way. A modified helmet could record a pilot's brainwaves. "When you say right 090 degrees . . . the computer would see that electrical pattern in the brain and turn the plane 090 degrees. If the pilot misheard instructions to turn 090 degrees and was thinking "080 degrees," the helmet would detect the error, then inject the right number via electromagnetic waves."

### **'No scientific evidence' equals no problem exists**

There is a second counterargument to Moreno's claim of no consensus on a theory for EMR mind control weapons. Moreno's claim is a widely-held belief and is also an old scientific tactic used for example, by tobacco companies to suppress known health effects linked to smoking for decades in order to maintain their profits and avoid lawsuits. Tobacco companies claimed for years that there was no direct cause and effect evidence and no theory on which to base claims by doctors of observed serious health problems found in their smoking patients. Tobacco companies made huge profits while denying for decades that smoking was linked to cancer deaths or was addictive.

Moreno and the public were fooled by experts with an agenda who put forth this often used but inaccurate scientific argument. Contrary to the tobacco company claims, a scientific theory is not essential for making scientific discoveries. Empirical scientific research is the well accepted scientific method of relying or basing a new discovery or finding solely on experiment and observation rather than theory. EMR weapons could be developed without a scientific theory, using the empirical method of research. In addition tobacco companies withheld scientific research that supported the link between smoking and health effects and addiction.

Another example of this effective scientific tactic is the analogy to atomic bomb scientists who controlled the scientific information, and suppressed and denied known health risks from ionizing radiation. Most radiation victims who were exposed to radiation from atomic bomb tests lost their legal battle based on the systematic and egregious lying by

government science experts. Government scientists denied health effects from ionizing radiation, claiming a lack of scientific proof for a causal connection to alleged ill health effects while the government suppressed or classified government documents that proved otherwise. This scientific tactic was very successful.

In the 1994 book *Myths of August: A Personal Exploration of Our Tragic Cold War Affair with the Atom*, Stewart Udall described his unsuccessful legal battles with the U.S. government over scientific evidence and classified government documents. Publisher's Weekly stated;

Above-ground nuclear bomb tests in Nevada after WW II made human guinea pigs of civilians living downwind in several western states, as later revealed by thousands of cases of radiation-induced cancer, childhood leukemia, burns and birth defects. In an expose of the government's decades-long policy of public deception concerning the hazards of radiation, Udall, secretary of the interior under JFK and LBJ and a former congressman from Arizona, condemns the U.S. nuclear testing program as a violation of the Nuremberg Code. He also describes his protracted struggle as a lawyer, beginning in 1979, representing the widows of Navajo uranium miners who developed cancer.

Contrary to U.S. government claims or to tobacco company claims, a scientific theory is not essential for making scientific findings or discoveries. One final example, the U.S. military withheld information about possible links between Agent Orange and birth defects, and downplayed the defoliant's link to cancer. This was reported in the Sacramento Bee November 1, 1998, page A4. There are many more examples. Advanced EMR weapons could be developed and the theory could be classified. In addition, advanced EMR weapons could be developed without a known scientific theory, using the empirical method of scientific research.

### **The continuous discovery and subsequent classifying of mind reading and EMR weapons**

In addition there is strong evidence of classified government mind control programs that could be advanced. According to a 1976 Los Angeles Times article, mind reading has been a classified technology for over thirty years. Since the 1970s, whenever mind reading technology is developed and published in unclassified science literature, the research is subsequently classified by intelligence agencies. The March 29th 1976 Los Angeles Times article, *Mind Reading Machine Tells Secrets of the Brain Sci-Fi Comes True* by Norman Kempster reported;

. . . Since 1973, a little-known Pentagon agency has been studying ways to plug a computer into an individual's brain waves or electroencephalograph (EEG) signals in the scientist's lexicon. The Advanced Research Projects Agency says the \$1 million-a-year program has passed its initial laboratory tests and is ready for determination of its military uses. . . .

Other applications of the EEG may come much sooner. It may be only a matter of time before the machines will be able to read a person's brain waves to determine just what he is thinking. . . .George H. Heilmeyer, director of the research agency, dropped tantalizing hints about the EEG program in his annual report to Congress. Although he has provided few details, enough has been said about the program to raise some questions.

For example, could these systems be used to read the minds of prisoners of war or to pick the brains of unsuspecting American citizens. Highly unlikely, agency scientists say. For one thing, the EEG must be individually calibrated. Brain-wave graphs mean different things for different persons. So it is necessary to obtain a baseline graph by having each individual think a specific series of thoughts. "It is quick and easy to make the calibration but it must be done for each individual." one scientist explained. Besides, under present programs, it is necessary to place electrodes on the individual's head. It does not hurt but it could scarcely be done secretly.

At MIT, however, scientists are studying magnetic brain waves that can produce graphs much like the electrical brain waves now being measured. Scientists for the research agency say it may be possible to pick up magnetic waves a foot or two from the subject's head, perhaps by placing a receiver in the back of a chair. Could these waves be projected over distances greater than a few feet? "We are now talking about a foot or several feet," one scientist said. "But the research agency has a pretty good idea of what it could be doing in the 1980s. . . .

This 2001 mind reading research was subsequently classified. In an October 2001 Signal Magazine article, *Decoding Minds, Foiling Adversaries*, John Norseen of Lockheed Martin Aeronautics Company declared, "We are at the point where this database has been developed enough that we can use a single electrode or something like an airport security system where there is a dome above our head to get enough information that we can know the number you're thinking, . . ." In the December 9, 2001, New York Times article, *The Year in Ideas: A TO Z; The Lie Detector That Scans Your Brain*, Clive Thompson reported;

John Norseen, a scientist with Lockheed Martin, is often able to discern when subjects are thinking of particular numbers. He predicts that by 2005, brain mappers will be able to automatically scan the skulls of everyone going through airports to search for potential hijackers. . . . But after the Sept. 11 attacks, the FBI and CIA are taking a closer look at brain mapping. And the Department of Defense is helping finance Norseen's research.

The November 12, 2000 Pittsburgh Post-Gazette (Pennsylvania) article, *Lecture on Brain Mapping Scheduled for Wednesday* by Dave Zuchowski, reported that Norseen can actually demonstrate the technology. This is important because many claims of mind control technology are overblown and never pan out. The article stated; "During his lecture, Norseen plans to demonstrate some of his research by engaging the audience in experiments. For instance, he'll ask someone from the audience to close their eyes and think of a number. By looking at the mathematical display that's produced, he should be able to tell what the number is."

### **Successful demonstrations of EMR bioeffects**

Here is an example of a theoretically proven mind control weapon that was demonstrated on the 1998 Learning Channel TV program, Ultrascience III, Spies Are Us, Beyond Productions. Dr. James Lin, "a world authority on microwave hearing" demonstrated the phenomena of microwave hearing. Pulses of microwaves are generated behind Dr. Lin and are absorbed by his brain and picked up by Dr. Lin's hearing mechanisms in his head. Dr. Lin stated that he could hear the microwave pulses, while no one outside the beam can hear the microwave pulses. Professor Lin stated it is possible, theoretically possible that one could embed or encode a message on a microwave signal in order to communicate via microwave hearing.

Here is another actual demonstration proven on animals. The November 1985, CNN news broadcast, Special Assignment, Weapons of War, Is there an RF Gap? by Chuck DeCaro. Dr. Ross Adey discussed a demonstration of the 1950s Russian Lida machine, which used electromagnetic energy to put Russian psychiatric patients to sleep, as a substitute for tranquilizers and to treat neurotic disturbances. Adey stated that it worked on cats and dogs and put them to sleep. The Defense and Foreign Affairs Daily, Jun 7, 1983, Vol. XII, Number 104, *Psy-War: Soviet Device Experiment* by Dr. Stefan Possony reported; ". . . Dr. Ross Adey, chief of research at Loma Linda . . . started testing the machine [the Lida] . . . the device is on loan to Dr. Ross Adey. "The machine is technically described as a distant pulse treatment apparatus. It generates 40 megahertz radiowaves which stimulate the brain's electromagnetic activity at substantially lower frequencies."

CNN news broadcast, Special Assignment by Chuck DeCaro, *Weapons of War, Is there an RF Gap?*, November 1985. This program featured a demonstration of EMR weapons effects on humans. Dr. Bill van Bise, electrical engineer, conducted a demonstration of Soviet scientific data and schematics for beaming a magnetic field into the brain to cause visual hallucinations. The demonstration on reporter Chuck DeCaro was successful. Dr. van Bise stated, "In three weeks, I could put together a device [weapon] that would take care of a whole town." Reporter Chuck DeCaro was blindfolded and his ears were blocked for sound in an experiment using Soviet specifications for equipment capable of generating specific but very weak magnetic signals designed to cause visual 'hallucinations'. DeCaro stated, "A parabola just went by. . . . I could see wave forms changing shape as they went by."

Some EMR expert scientists, including Dr. Becker who appeared in the 1985 CNN news broadcast , have reported consequences for speaking out on the EMR technologies. For example, while the military denied nonthermal bioeffects of EMR during the Cold War, Becker disagreed and described his 1970s loss of government funding for nonthermal EMR bioeffect research in his 1990 book entitled, *Crosscurrents, Perils of Electropollution*.

Eldon Byrd also appeared in the 1985 CNN news broadcast and reported that his unclassified EMR government research was subsequently classified. Byrd was quoted in the US News and World Report, July 7th 1997, *Wonder Weapons, The Pentagon's Quest for Nonlethal Arms is Amazing. But is it Smart?* by Douglas Pasternak. Here is the complete quote on page 45-46;

### **Low-frequency sleep**

From 1980 to 1983, a man named Eldon Byrd ran the Marine Corps Nonlethal Electromagnetic Weapons Project. He conducted most of his research at the Armed Forces Radiobiology Research Institute in Bethesda, Md. "We were looking at electrical activity in the brain and how to influence it," he says. Byrd, a specialist in medical engineering and bioeffects, funded small research projects, including a paper on vortex weapons by Obolensky. He conducted experiments on animals-and even on himself-to see if brain waves would move into sync with waves impinging on them from the outside. (he found that they would, but the effect was short lived.)

By using very low frequency electromagnetic radiation-the waves way below radio frequencies on the electromagnetic spectrum-he found he could induce the brain to release behavior-regulating chemicals. "We could put animals into a stupor," he says, by hitting them with these frequencies. "we got chick brains-in vitro-to dump 80 percent of the natural opioids in their brains," Byrd says. He even ran a small project that used magnetic fields to cause certain brain cells in rats to release histamine. In humans, this would cause instant flulike symptoms and produce nausea. "These fields were extremely weak. They were undetectable," says Byrd. "The effects were nonlethal and reversible. You could disable a person temporarily," Byrd hypothesizes. "It [would have been] like a stun gun."

Byrd never tested any of his hardware in the field, and his program, scheduled for four years, apparently was closed down after two, he says. "The work was really outstanding," he grumbles. "We would have had a weapon in one year." Byrd says he was told his work would be unclassified, "unless it works." Because it worked, he suspects that the program "went black." Other scientists tell similar tales of research on

electromagnetic radiation turning top secret once successful results were achieved. There are clues that such work is continuing. In 1995, the annual meeting of four-star US Air Force generals-called -CORONA-reviewed more than 1,000 potential projects. One was called 'Put the Enemy to Sleep/Keep the Enemy/From Sleeping. It called for exploring 'acoustics,' 'microwaves,' and 'brain-wave manipulation' to alter sleep patterns. It was one of only three projects approved for initial investigation.

Moreno and others believe the lack of theories and deployment of EMR weapons is proof that there are no advanced mind control weapons. But the above general theories, the continuous discovery and subsequent classifying of mind reading and EMR weapons, and the successful demonstrations of EMR bioeffects research are indications of successful EMR research and weapons. The indications taken together and covering a fifty year time period are arguably a strong indication of advanced government EMR mind control weapons and that EMR mind control weapons theory will remain classified.

Now there is new military interest in EMR nonthermal bioeffects weapons research. This article clearly supports that EMR weapons are scientifically feasible, are likely successful and do work, contrary to numerous official government statements. The Russian research described below would indicate that the U.S., for national security reasons, would also have to develop EMR weapons. November 24, 2006, Defense Tech *Directed Energy, US Bioelectromagnetic Weapons Research* by David Hambling, posted at [www.defensetech.org](http://www.defensetech.org).

Could new weapons stun or paralyze with a beam of radio energy?  
I have discussed proposals for 'bioelectromagnetic weaponry' in Defence Tech before, here and here, but for the first time details are emerging of Air Force-sponsored work in this field. This report, entitled Interdisciplinary research project to explore the potential for developing non-lethal weapons based on radiofrequency/microwave bioeffects -- states their goal:

Our research is to lay the foundation for developing non-lethal stunning/immobilizing weaponry based on radiofrequency (RF)/microwave(MW) radiation by identifying RF/MW parameters potentially capable of selectively altering exocytosis, the process underlying neurotransmitter release and hence nervous system functioning.

. . .The researchers at the University of Nevada have concluded that non-thermal effects of RF do exist and may be harnessed. In an abstract here (on page 317)- a study of Non-Thermal effects of RF Radiation on Exocytosis - states "The effects of RF exposure on catecholamine release that have been observed to date cannot be explained by an increase in temperature."

And there's more. Other work by the same team, is described here

It will also support a DEPSCoR- funded program that extends those studies to include microwave frequencies and to explore the effect of pulsed and CW RE/microwave exposure on skeletal muscle contractility.

The suggestion is that a correctly tuned beam of microwaves (possibly pulsed or modulated) would be able to interfere with skeletal muscles. This might ultimately give a means of producing the same sort of non-lethal effects as a Taser -- but potentially from much greater range and over a wide area.

So far, the work has been entirely on 'in vitro' cell samples in the laboratory, and only modest alterations in cell function have been produced. This is a very long way from being able to actually influence a living creature. Any suggestion that this sort of weapon has already been fielded by the US should be treated with skepticism. . . .

Everything is in very early stages in the US program. But, as I mentioned a while back, the Russians have been looking at this technology for years. Dr. Vitaly N. Makukhin of the Trymas Center in Moscow has published papers on "Electronic equipment for complex influence on biological objects" which he claims can produce effects including "disorder of the autonomic nervous system." Few people have taken him seriously in the West before. Now that the same sort of effects are being confirmed in US labs, perhaps we will start taking more of an interest in what this type of weapon may be able to do.

### **Section 8 EMR mind control weapons more powerful than the atomic bomb**

Moreno doesn't put any weight into the evidence that nations would go to great lengths to develop mind control weapons. Gregg Herken, Smithsonian curator is representative of the numerous comments about the ultimate power and impact of future government mind control weapons. This is rhetoric but it provides a glimpse of what nations want for future weapons. Herken reviewed a book about the supersecret U.S. NRO or National Reconnaissance Office, an intelligence directorate for satellites. In the April 6, 2003 Boston Globe book review of *Secret Empire: Eisenhower, the CIA, and the Hidden Story of America's Space Espionage* by Philip Taubman, New York Times editor, Herken wrote;

. . . Despite the faults and failures that Taubman cites, it is difficult to imagine how the United States will become less reliant upon its eyes-and ears-in-the-sky. Instead, The NRO's wizards in Chantilly, VA., are no doubt looking forward to the day when they will have the ultimate in technical collection capability: a

satellite that can see into the mind of the likes of Saddam Hussein or Osama bin Laden.

The *Nature* reviewer of Moreno's book wrote; "Partly because its activities are more visible, Moreno focuses especially on the Defense Advanced Research Projects Agency (DARPA), which supports unclassified academic research with potential military applications. DARPA has a distinguished record of supporting innovation, including the Internet, so its involvement in brain research must be taken seriously." Moreno failed to mention the following DARPA research. This DARPA scientist compared weapons that can control the mind as better than the atomic bomb. The scientist further stated that "you can get into the brain with microwaves" and he discussed Soviet EMR bioeffects research as a serious threat to the U.S.

A freedom of information act request for further information was still being processed over three years later. In the May 22, 1988 Washington AP, article entitled, *Looking at The Moscow Signal, the Zapping of an Embassy 35 years later, The Mystery Lingers*, Barton Reppert reported;

[Richard S.] Cesaro, [deputy director for advanced sensors at the Pentagon's Advanced Research Projects Agency] helped run the classified [1960s] Project Pandora, in which monkeys were exposed to a 'synthetic Moscow signal' in a laboratory at Walter Reed Army Institute of Research.

. . . Cesaro, in an interview prior to his death two years ago, contended that "in our experiments we did some remarkable things. And there was no question in my mind that you can get into the brain with microwaves.

Arguing that the Soviet bloc's investment of funds, personnel and laboratory facilities in research on non-ionizing radiation bioeffects has far outstripped the West's, he said, "I look at it as still a major, serious, unsettled threat to the security of the United States, . . . If you really make the breakthrough, you've got something better than any bomb ever built, because when you finally come down the line you're talking about controlling people's minds,"

Robert Oppenheimer, the scientist who developed the atomic bomb, spoke about the terrifying power of mind control, even more powerful than the atomic bomb. In The American Psychologist *Analogy in Science*, Oppenheimer wrote of a paper he presented to the American Psychological Association, San Francisco, CA on September 4, 1955. Oppenheimer stated;

There are other ways in which we are brothers. In the last ten years the physicists have been extraordinarily noisy about the immense powers which, largely through their efforts, but through other efforts as well, have

come into the possession of man, powers notably and strikingly for very large-scale and dreadful destruction.

We have spoken of our responsibilities and of our obligations to society in terms that sound to me very provincial, because the psychologist can hardly do anything without realizing that for him the acquisition of knowledge opens up the most terrifying prospects of controlling what people do and how they think and how they behave and how they feel.

This is true for all of you who are engaged in practice, and as the corpus of psychology gains in certitude, and subtlety and skill, I can see that the physicist's plea is that what he discovers be used with humanity and be used wisely will seem rather trivial compared to those pleas which you will have to make and for which you will have to be responsible.

## **Section 9 Technological obstacles can be overcome**

Moreno discussed another widely-held belief that enormous technological obstacles prevent current development of mind control or mind reading capabilities and also human surveillance.

As with the Manhattan project and the government project to put a man on the moon, scientific breakthroughs can be achieved with Apollo-like government programs. There are no known technologies for the ability to record brain activity at a distance and with high precision or the ability to alter it at a distance, again with high precision. But thought reading capabilities from a distance of several feet and EMR weapons targeting capabilities at battlefield distances were reported in the 1976 Los Angeles Times article, previously cited and the 1990 International Review of the Red Cross article below. The 1980s article cited below on EMR warfare described general technical details for remote targeting and sensing of soldiers at battlefield distances. Remote sensing of humans is a 2003 goal of U.S. Special Operations Command. This is one of the rare times this goal has been cited in a government document. The existence of the National Reconnaissance Office, known as the NRO was classified since 1961 and only became public knowledge in the 1992. Although extremely difficult to imagine, a Manhattan mind control project is within the realm of possibilities.

In the November 1, 1990, International Review of the Red Cross *The Development of New Antipersonnel Weapons*, Louise Doswald-Beck and Gerald C. Cauderay explain how an antenna system to remotely target a soldier at battlefield distances with EMR weapons would work.

However it is important to mention that the lethal or incapacitating effects which can be expected from weapon systems using this technology can be produced with much lower energy levels. Using the principle of magnetic field concentration, which permits the control of the geometry on

the target, by means of antenna systems especially designed for the purpose, the radiated energy can be concentrated on very small surfaces of the human body, for example the base of the brain where relatively low energy can produce lethal effects.

. . . Research work has also revealed that pathological effects close to those induced by highly toxic substances could be produced by electromagnetic radiation even at very low power, especially those using a pulse shape containing a large number of different frequencies.

. . . Some research seems to have confirmed that low-level electromagnetic fields, modulated to be similar to normal brainwaves, could seriously affect brain function. Experiments with pulsed magnetic fields carried out in animals have reportedly produced specific effects such as inducing sleep and triggering anxiety or aggressiveness, depending on the modulation of the frequency used.

It is, on the other hand, well known that lethal effects can also be produced by using higher power levels than those used for the experiments on behavior modification. An anti-personnel weapon based on such biophysical principles could produce similar effects to those of a nerve gas, but would have no secondary effects and leave no lasting trace.

Not surprisingly, scientific theories, let alone technical details on transmitting and detecting human electromagnetic radiation signals are hard to find. It is known in the open literature that remote transmitting and detecting of human signals are not science fiction. Zhijun Wei, a UC Davis electrical engineering student evaluated this 1988 German think tank article on battlefield use of antipersonnel EMR weapons. Wei concluded; "In order to have enough energy to reach the target, high power sources and highly directional antenna are key technologies. The weapons described below are possible and provide a glimpse of what future warfare may be like."

The 1988, Executive Intelligence Review Special Report, *Electromagnetic-Effect Weapons: The Technology and the Strategic Implications*, editor, Michael Liebig, EIR News Service Inc., 317 Pennsylvania Ave. S.E., 2nd Floor, Washington, DC 20003 Page 14-17;

### **Holography and Electromagnetic Warfare**

As our discussion of biological effects already indicated, electromagnetic anti-personnel weapons depend essentially on "tuning" the output signal to the target. This goes not only for the frequency and amplitude of the signal, but for its entire space-time "shape." Figure 6, for example, is drawn from thermographs of models of the human body irradiated by RF radiation of the same frequency, but with field geometries. These and other

experiments demonstrate that the areas of maximum absorption of electromagnetic energy inside the body depend on the geometry of the incident wave. By choosing the right geometry, the energy can be focused into any desired area, such as the brain. A sophisticated EP Weapon must thus be able to project a specific geometry of electromagnetic field onto a distant object, over a given terrain and in given surroundings. Without going into technical details of waveguides and various antenna types, we shall briefly present one of the relevant techniques: the principle of the phased array.

A phased-array antenna consists of an assemblage of many individually controlled emitting (or receiving) elements, placed in a fixed geometrical arrangement. The output field of the array is the sum of the waves emitted by the individual elements. By electronically controlling the relative phases of these individual signals, the output field can be given any desired "shape" and direction, limited only by the wavelength used, the number of elements and the size of the array. The huge Soviet ABM radar at Krasnoyarsk, for example, contains an 83 meter diameter phased array of thousands of elements. The output can consist of a single, very narrow beam, or hundreds of independently directed beams, all depending on the "phasing" of the elements. This radar can track large numbers of missiles simultaneously, without any mechanical motion of the antenna.

The functioning of phased-array antennae is thus closely related to holography, or three-dimensional photography. In a hologram, photographic plate records interference patterns, corresponding to the phase relationships of laser light reflected from the object. When the holographic plate is illuminated by a laser, the phase relationships are "reconstituted" and the viewer has the impression of seeing a three dimensional object. The ensemble of elements of a phased-array antenna takes the place of the holographic plate, but at a much longer wavelength than visible light (centimeters and millimeters instead of fractions of a micrometer). "When operated in a receiving mode, the phased array obtains much more information than an ordinary antenna; like the hologram, it measures entire electromagnetic field geometries, not merely a one dimensional "signal."

The holographic principle underlying phased-array systems points to a potentiality for treating any desired three-dimensional, electromagnetic field distribution around a target object, from a distance, correcting for reflections, obstacles and other interference. Moreover, the field can be transformed and shifted from one location to another in space within a fraction of a second. Thus, an ideal EP-weapon could attack many individual targets, simultaneously or in rapid succession. One or more phased arrays would be used in receiving and transmitting modes to "lock-

on" to selected targets, and determine the necessary geometry of the attack pulses.

To fully exploit such potentialities, the weapon would require for its target-acquisition and beam-control systems, sophisticated high-speed computers, able to perform complex computations of the "inverse-scattering" type. Miniaturized systems of this sort are well within the reach of "fifth generation" computer technology. "Hybrid" digital analog systems would be simpler, smaller, and faster still. There is much overlap in requirements between EP weapons and systems developed for strategic defense(SDI).

Remote sensing of humans was described in the May 1, 2003, National Defense No. 594, Vol. 87 article, *Special operators seeking a technological advantage, U.S. Special Operations Command* by Harold Kennedy;

The U.S. Special Operations Command is looking for 'leap-ahead' technologies that can give its troops a decided advantage over their adversaries in wars such as those in Iraq and Afghanistan.

. . . Signature reduction. Technologies must enable significant reductions in the signatures of the special operator and his equipment, including air, land and sea-based platforms, . . .

Signatures are distinctive patterns or characteristics by which something can be recognized. They can involve visual, aural, olfactory, seismic, electromagnetic, laser, infrared or radio frequency signals. Projects underway include a vehicle camouflage system; a small, versatile, maritime mobility craft, and active noise cancellation.

. . . Remote sensing. Sensors must be capable of detecting electronic transmission, seismic, acoustical, infrared, electro-optic, electromagnetic and radio frequency signatures--the physical presence--of target individuals and groups, . . .

This 2004 government document entitled *Controlled Effects, Scientists explore the future of controlled effects* was cited in full in Section 5. It provided a description of remote human targeting of "Controlled Personnel Effects" anywhere in the world via satellite in the near future. This USAF "Controlled Personnel Effects" is a military description of EMR weapons and implementation that sounds like science fiction but is not. The research has already begun. The document stated; "With the advent of directed energy and other revolutionary technologies, the ability to instantaneously project very precise amounts of various types of energy anywhere in the world can become a reality."

Since the 1940s, remote sensing has been among the deepest secrets of the nation. The scientific theories behind human surveillance could be advanced and not known to those in the unclassified academic communities. In a fascinating account, Dr. John Cloud explained how the highest levels of secret satellite research was carried out with the intent of remaining secret forever. The article described 1950s CIA satellite programs conducted with unaccountable funds of the director of Central Intelligence and the most secret classifications in the US government. Cartography and Geographic Information Science, Vol. 29, No.3 2002, '*American Cartographic Transformations during the Cold War*' by John Cloud;

. . . Through several decades of "black" programs, the CIA devised a methodology for developing overhead imagery sensors and their allied technologies. "Black" programs encompass many endeavors, but for this discussion the important point is that CIA imagery acquisition programs involved small numbers of sole-source contractors cleared into top-secret codeword compartmentalized security domains and paid in unaccountable funds issued directly from the Directorate of Central Intelligence (DCI).

The model began in the early 1950s with the Genetrix program, which used experimental high-altitude reconnaissance cameras mounted in stratospheric balloons. Then came project Aquatone, better known as the U-2, the first in a series of high performance, high-altitude reconnaissance planes built in the middle 1950s. The imagery associated with these sensor platforms was ordered under some of the most restricted security protocols ever devised—a set of protocols originally called Talent.

Satellite surveillance is known to be one of the deepest secrets of the nation. From 1961 to 1992, the existence of the National Reconnaissance Office (NRO) was a highly classified secret. Thirty years later, a few details have been revealed with rhetoric such as setting a goal of "intelligence capabilities unimaginable just a few years ago." Here is a National Security Archive, *Electronic Briefing Book, No. 35* at <http://www2.gwu.edu/~nsarchiv/NSAEBB/NSAEBB35/>

*The NRO Declassified*. In September 1992 the Department of Defense acknowledged the existence of the National Reconnaissance Office (NRO), an agency established in 1961 to manage the development and operation of the nation's reconnaissance satellite systems. The creation of the NRO was the result of a number of factors.

. . . *Defining the Future of the NRO for the 21st Century, Final Report, Executive Summary* August 26, 1996 Unclassified 30 pp.

This report was apparently the first major outside review of the NRO conducted during the Clinton administration, and the first conducted after the NRO's transformation to an overt institution and its restructuring were firmly in place. Among those conducting the review were former Vice

Chairman of the Joint Chiefs of Staff, Adm. David E. Jeremiah, former NRO director Martin Faga, and former Deputy Director of Central Intelligence John McMahon. . . .

The panel concluded that where the NRO's current mission is 'worldwide intelligence,' its future mission should be 'global information superiority,' which "demands intelligence capabilities unimaginable just a few years ago." The panel also recommended creation of a fourth NRO directorate, which was subsequently established, to focus solely on the development of advanced systems, in order to "increase the visibility and stature of technology innovation in the NRO."

Moreno's conclusion that there are no advanced mind control weapons seems overstated given the known science literature and the great secrecy surrounding mind control weapons and human surveillance.

### **Section 10 The government cover story: if there are no proven EMR bioeffects then there are no EMR weapons**

Moreno only superficially examined Cold War Russian mind control weapons and claims. On page 75, Moreno wrote a benign and open-ended description of Russian mind control programs;

“Since the 1970s, there have been reports about Soviet and Chinese interest in “psychotronic” weapons intended to influence psychological and physiological processes at a distance. One of the proposed avenues to other minds has been electromagnetic radiation or “extremely low frequency” (ELF) waves. American interest in these matters was partly a response to Soviet activity. With the collapse of the Soviet Union, it is an open question whether national security and science agencies will continue to probe all the possibilities presented by neuroscientific advances, including interventions that might be considered attempts at mind control.“

Moreno dismissed fifty years of an East/West scientific controversy. Rarely reported in mainstream press, this is a fascinating and well-documented Cold War story; that EMR nonthermal bioeffects are the likely basis for East/West mind control weapons projects. This section includes the key historical facts.

The basic controversy over nonthermal bioeffects of EMR was firmly established by the military's heavy dependence on EMR technologies for radars, electronic systems, antennas, etc. If nonthermal bioeffects were found to affect the health of military personnel, lawsuits and costly preventive measures would be required, therefore the standard for exposure to EMR was set above the nonthermal bioeffects level.

Dr. Robert O. Becker, a well-known EMR researcher explained the how the government

suppressed nonthermal bioeffects EMR research in his 1990 book, *Crosscurrents, The Perils of Electropollution*. In the chapter entitled, The Hidden Hand on the Switch: Military Uses of the Electromagnetic Spectrum, page 297, Becker explained;

The military organism was designed on the 10 mW standard and, once in place, it had to be defended against the possibility of nonthermal bioeffects. The recognition and validation of these effects would mean the collapse of the total organism and the death of C3I, (for command, control, communications, and intelligence). . . . evidence for nonthermal effects was viewed as a threat to national security.

Control over the scientific establishment was maintained by allocating research funds in such a way as to ensure that only 'approved' projects -- that is projects that would not challenge the thermal-effect standard -- would be undertaken. . . . In some instances, scientists were told that nonthermal effects did occur, but that national security objectives required that they be exceptionally well established before they became public knowledge.

All of these reports shared certain characteristics. Scientific data indicating nonthermal bioeffects were either ignored or subjected to extensive and destructive review. . . . while a statement such as 'There is no evidence for any effects of pulsed magnetic fields on humans' would have been literally true, it would have ignored the many reports of such effects on laboratory animals and the fact that no actual tests had been conducted on humans.

Scientists who persisted in publicly raising the issue of harmful effects from any portion of the electromagnetic spectrum were discredited, and their research grants were taken away. Deployment of powerful and exotic electromagnetic systems continues, with little, if any, consideration given to the potential impact of these systems on the health and safety of the public.

The 1984 BBC TV documentary, *Opening Pandora's Box*, explained further;

The safety standards for electromagnetic radiation, EMR, were set higher in the 1950s to allow the military to have unlimited use of EMR technology. At the time, American science reports suggesting EMR health effects of brain tumors, heart conditions, leukemia, cataracts and more, were ignored. The military was a major source of funding and reports were not followed up. The government safety levels for EMR were challenged in courts all around the world.

Microwave News, a journal on nonionizing radiation, for example, reported that radar men opposed microwave tower health dangers.

Air traffic controllers and police officers filed complaints. These court cases revolved around the validity of the safety standard. Dr. Milton Zaret, another Pandora scientist explained that most government committees who set the safety standards around the world were set up the in the same way as in the U.S. Members of the committee did not want to impede or put restraints on progress by tightening the safety standards for EMR.

Mikhail S. Gorbachev, the Soviet leader at the time, described EMR weapons as comparable to the atomic bomb in a 1986 BBC Summary of World broadcast:

Weapons based on new physical principles would include, amongst others, means in which physical principles which have not been used hitherto are used to strike at personnel, military equipment and objectives. Amongst weapons of this kind one might include beam, radio-wave, infrasonic, geophysical and genetic weapons. In their strike characteristics these types of weapons might be no less dangerous than mass strike weapons. The Soviet Union considers it necessary to establish a ban on the development of arms of this kind. The Soviet Union has not carried out, nor does it intend to carry out either tests of such arms, or--even less so--the deployment of them. It will seek to ensure that all other countries do not do so either.

Russia and the East Block's position was that the nonthermal effects of EMR could be used to develop new weapons of mass destruction. The Russian scientific literature going back to the 1930s supported a theory of nonthermal effects of EMR. In 1979, the UN Committee on Disarmament discussed Russian proposals to ban "new types of weapons of mass destruction" and included the following possible new weapons technologies. V.L. Issraelyan, Representative of the USSR to the Committee on Disarmament. *Negotiations on the Question of the Prohibition of New Types of Weapons of Mass Destruction and New Systems of Such Weapons* (UN Committee on Disarmament Document CD/35, July 10, 1979);

#### **4. Means using electromagnetic radiation to affect biological target**

As a result of research into the effects of electromagnetic radiation on biological targets, the existence of harmful effects of radio-frequency radiations within a wide range of frequencies on such vitally important organs of the human as the heart, the brain and the central nervous system may now be regarded as a firmly established fact. Assessments quoted in international literature of the potential danger of the development of a new weapon of mass destruction are based on the results of research into the so-called "non-thermal" effects of electromagnetic radiation on biological targets. These effects may take the form of damage to or disruption of the functioning of the internal organs and systems of the human organism or of changes in its functioning.

In sharp contrast to the Russian position on the nonthermal effects of EMR, the U.S. military, industry, and government scientists endorsed the U.S. safety standards for EMR exposure, established in the 1950s by Herman Schwan, a Nazi Paperclip scientist. The US operated Project Paperclip between 1945 and 1955 in an attempt to exploit the expertise of German scientists after WW II, and 765 scientists were employed by the US government, including Schwan. Schwan's position, that nonthermal effects of EMR have not been proven, is still largely adhered to today. Schwan worked at the University of Pennsylvania on numerous government contracts and received Navy and National Institute of Health (NIH) funding throughout his entire career.

As stated above, the U.S. policy for EMR health exposure limits is based on the theory that EMR has no provable health or bioeffects, only the effects from heating. In any discussion about the science of EMR weapons, it is critical to understand that the thermal effects of EMR are limited to those biological effects caused only by heating, as in warming food in a microwave oven. Nonthermal or athermal effects of EMR are any biological effect not caused by heating. As will be seen, the thermal/nonthermal distinction sounds simple but this is the fundamental basis of a fifty year, international, scientific controversy.

On page 75-6, Moreno barely mentioned the EMR weapons controversy and emphasized a lack of reliable information on Russian mind control weapons;

Although psychotronic warfare has been seized upon by those who believe a security agency is controlling or disrupting their brain, it's goal as information warfare would be to attack communication systems, thus causing a catastrophic infrastructure failure. Jamming transmissions by Saddam's radar installations in the run-up to the Iraq war was an elementary example of such tactics. Similar principles might be applied to the mental energy of the war fighters themselves, perhaps by "pulse-wave weapons," which would disrupt motor signals from the central cortex. Once again, though, reports about Russian possession of such weapons are highly disputed, let alone the technical capabilities the weapons might have.

Contrary to Moreno's findings of a lack of available information and little threat from Russian mind control weapons, there is another set of available facts. It is difficult to understand why Moreno does not consider the significant Cold War history that is surrounded in heavy secrecy, denials and disinformation. The EMR weapons are based on sound although general, scientific theories that have never been disproven, while new developments are continuously classified. Moreno does not acknowledge the obvious U.S. and Russian government's national security bully pulpit for what it is. For example, the official U.S. government statements are that EMR mind control weapons don't work and are science fiction, while at the same time the government is heavily funding and classifying EMR mind control weapons research.

Intelligence agencies have been involved with EMR mind control and bioeffects on the brain for decades but this information is hard for the general public to find. The U.S. was investigating possible Russian EMR weapons. Dr. Robert O. Becker was a consultant to the CIA, investigating possible nonthermal EMR effects on fighter pilots shot down by the Soviets, as reported in a 1984 BBC TV documentary, *Opening Pandora's Box*.

Becker is an expert on EMR bioeffects. As reported in the London Guardian Newspaper, February 2, 1991, *War in the Desert* by Simon North, Becker has twice been nominated for a Nobel prize for his work in bio-electromagnetism and had been the recipient of a prestigious US award for his medical research. Becker's Cold War research on the nonthermal bioeffects of EMR has not been disproven. In addition, post Cold War EMR weapons and neuroscience research, and government reports are building on and reporting on the funding of research very similar to Becker's thirty year old nonthermal EMR bioeffects research.

As reported in a 1984 BBC TV documentary, *Opening Pandora's Box*, Becker was asked by the CIA in the early 60s to determine whether pilots being shot down and captured by Soviets "had personality changes induced in them by exposure to EMR which they were not aware of." The pilots were interned by the Soviets for two to six weeks. They were psychologically tested before they went on a flight, and again, after they were released by the Soviets. The psychological test results revealed "considerable personality alterations" after Soviet internment. During debriefing sessions, pilots reported they were treated well, and were not aware of any EMR exposure by Soviets. Becker's answer to the question whether EMR exposure could cause personality changes, was; "I told them [the CIA] I thought it was a distinct possibility, but that no one could give them that answer, for sure, at this present time, at that time."

Dr. Ross Adey, a world-renowned EMR expert has testified before the US Congress on government suppression and control of research into nonthermal effects of EMR. A 1988 AP article stated;

Since the early 1980s, however, federal government support for non-ionizing radiation bioeffects research has declined markedly. W. Ross Adey, a leading researcher based at the Veteran's Administration Medical Center in Loma Linda, Calif., told a House subcommittee last Oct. 6 that current levels of government funding-now about \$7 million a year-are disastrously low. "There is reason to believe that this situation has arisen in part through a well-organized activity on the part of major corporate entities from the consumer and military electronic industries to discredit all research into athermal biological and biomedical effects," Adey said.

In the early 1980s, Becker provided an explanation for the opposing US/Russian scientific views on nonthermal effects of EMR. In the BBC documentary, *Opening Pandora's Box*, Becker declared;

The US may very well not have any [secret EMR weapons] program whatsoever. On the other hand, it is equally valid to have such a program being conducted in even greater secrecy than the Manhattan Project was conducted. And the best cover story I could think of for that would be for the U.S. to portray itself to the rest of the world, as a nation that was discarding the possibility of EMR weapons, entirely, based upon its best scientific evidence.

Becker proved to be correct. On the November 1985 CNN news broadcast, Special Assignment *Is there an RF Gap Weapons of War* by Chuck DeCaro, Becker stated; "The government has never disproved the psychological effects of electromagnetic radiation." Starting with the 1950s through the 1990s, the "best US scientific evidence," was that there were no proven nonthermal EMR effects and therefore no possibility of a classified U.S. EMR weapons program. Most U.S. scientists still adhere to this official position. For example, Garwin, who authored the 1999 and 2004 CFR nonlethal weapons reports, as cited above, stated; . . . In my analyses of the effect of radiowaves on people, I have never found any significant effect other than heating of the tissues. . . . So I don't think there is much in the threat of electromagnetic signals to control or disorient people by the effect on the human brain."

With the breakup of the Soviet Union, the Pentagon publicly unveiled the nonlethal weapons program including weapons based on nonthermal EMR effects and the U.S. policy that there are "no proven nonthermal EMR effects" took a 180 degree turn. The July 7, 1997 US News and World Report, *Wonder Weapons* article confirmed;

For hundreds of years, sci-fi writers have imagined weapons that might use energy waves or pulses to know out, knock down, or otherwise disable enemies-without necessarily killing them. And for a good 40 years the U.S. military has quietly been pursuing weapons of this sort. Much of this work is still secret, and it has yet to produce a usable 'nonlethal' weapon. . . . Scores of new contracts have been let, and scientists, aided by government research on the 'bioeffects' of beamed energy, are searching the electromagnetic and sonic spectrums for wavelengths that can affect human behavior. . . .

That EMR can cause nonthermal biological effects is now a proven scientific theory, although still controversial. At a 1990 General Assembly of the International Union of Radio Science held in Prague, Ross Adey, the world-renowned EMR expert concluded, "It is no longer a matter of speculation that biomolecular systems are responsive to low level, low frequency electromagnetic fields. Not only is tissue heating not the basis of these interactions, but the many instances of responses windowed with respect to field, frequency and intensity set a rubric for their consideration in physical mechanisms involving long range ordering at the atomic level."

In the 1970s, while at the Brain Research Institute at the University of California, Los Angeles, Adey worked with the Department of Defense on Project Pandora, the super-secret program that sought a way to use electromagnetic radiation for mind control. This was reported in the May 2004 Microwave News *News and Comment* obituary for W. Ross Adey.

In addition, the 2002 report by the Naval Studies Board of the National Research Council (NRC) under the National Academy of Sciences entitled, *An Assessment of Non-Lethal Weapons Science and Technology*, hypothesized;

Leap-ahead non-lethal weapons technologies will probably be based on more subtle human/RF interactions in which the signal information within the RF exposure causes an effect other than simply heating: for example, stun, seizure, startle, and decreased spontaneous activity. Recent developments in the technology are leading to ultrawideband, very high peak power, and ultrashort signal capabilities, suggesting that the phase space to be explored for subtle, yet potentially effective non-thermal biophysical susceptibilities is vast.

The U.S. government continues to use the cover story, 'no proven EMR bioeffects except heating' while heavily funding classified and unclassified EMR bioeffects weapons research. As cited above, the former USSR has advocated banning EMR weapons since the 1970s. To summarize, the US has heavily classified nonlethal weapons since the 1960s and has denied the existence of weapons effects of EMR up to the 1990s. On CNN News, the Pentagon said, "Radiofrequency weapons are too sensitive to discuss," and has maintained this position throughout the 1980s. In the 1990s, however, the military admitted to funding and looking for EMR weapons based on nonthermal bioeffects.

Russian classified mind control programs were revealed only as a result of the monumental event of the breakup of the Soviet Union. The 1993 Defense News article, *US Explores Russian Mind-Control Technology*, "described some of Russia's EMR weapons;

Known as acoustic psycho-correction, the capability to control minds and alter behavior of civilians and soldiers may soon be shared with US military, medical and political officials, according to US and Russian sources. . . . Pioneered by the government-funded Department of Psycho-Correction at the Moscow Medical Academy, acoustic psycho-correction involves the transmission of specific commands via static or white noise bands into the human subconscious without upsetting other intellectual functions.

Russian top secret and extensive mind control weapons programs were in chaos. The 1993 Defense News article stated that U.S. and Russian sources were planning "discussions aimed at creating a framework for bringing the issue under bilateral or

multilateral controls. . . . Therefore, the Russian authors have proposed a bilateral Center for Psycho-technologies where US and Russian authorities could monitor and restrict the emerging capabilities.”

In addition, a 1993 Defense Electronics article discussed concerns of the Advanced Research Projects Agency (ARPA); mind control weapons “may still be in the Russian military inventory, and . . . the technology could be exported to Third World nations via the growing black market in military equipment from the former Soviet Union. . . .” The United States emerged as the single world super power and the use of EMR weapons is most likely controlled by classified international agreements.

Since treaties can be classified, the public is kept in the dark about new developing weapons. The 1981 book, *Born Secret The H-Bomb, the Progressive Case and National Security*, by A. DeVolpi et al, page 138-9 explained;

. . . foreign policy and related activities allow a wide expanse for classification, including the subject matter of treaties to which the United States might become bound. . . . The pervasiveness of secrecy in foreign affairs is amazing. A taxonomy by Frank and Weisband of principal foreign affairs secrets contains the following categories: . . . treaties, agreements; . . . secret diplomatic negotiations; . . . executive process (. . . expert advisory briefs, reports from diplomats); . . . tariff or import agreements;. . .

This much is known, as reported in the 1993 Defense News article. Janet Morris, a key U.S. liaison between Russian and U.S. officials stated that "the [mind control] capability has been demonstrated in the laboratory in Russia and should be placed under international restrictions at the earliest possible [time]." In the late 1990s, however, Morris claimed that Russian mind control technology "didn't work." This is the official U.S. government position/cover story today, along with the official statements of 'there are no proven bioeffects of EMR and no government mind control programs' and 'it's science fiction' or 'it's classified'.

## **Section 11 Why so much government disinformation on EMR bioeffects?**

According to Moreno’s "longtime friend and former neighbor of mine in Washington” and former Naval intelligence officer, the East/West Cold War EMR and mind control weapons debate was probably disinformation.

Moreno explained on page 86-87;

During the 1960s and 1970s, various government agencies paid for parapsychological studies, including DARPA, the National Institutes of Health, the Navy, and the CIA. At the same time, the Soviets invested in

similar research, perhaps even more heavily, often under the heading of "psychotronics." Parapsychologists might not posit an explanatory theory, but the proponents of psychotronics contend that minds can interact based on psychic energy and also that electronic devices can influence psychic energy. There's an attempt to subsume psychic phenomena under natural processes. The idea is that lower-frequency beams such as microwave radiation, which are at the other end of the energy spectrum from X-rays, can affect brain cells and thereby alter psychological states. The low-frequency bombardment of the U.S. embassy in Moscow by the KGB in the late 1970s seemed evidence that the Soviets were serious at least about exploring the possibilities of low-frequency weapons, trying perhaps to cause psychological problems among diplomatic personnel. A technical debate then ensued about whether it was possible for such energies to cross the blood-brain barrier, a protective wall formed by the vessels that carry blood to the brain.

Although this question has never been conclusively settled, psychotronics still has its advocates, a minority of whom contend that illicit experiments involving electromagnetic fields are being conducted by intelligence agencies. But the heyday of enthusiasm for such possibilities in the intelligence community seems to have passed over twenty years ago, when a retired Pentagon analyst and Army officer named Thomas E. Bearden attributed various events like Legionnaires disease, UFOs, and mutilated cattle in the Midwest to Soviet psychotronic experiments, according to journalist Ronald McRae. But the apocalyptic weapons the Soviet Union was said to be prepared to release did not save the empire, and no such weapons of mass destruction were found during or after the cold war.

On the face of it all, this activity around psyops looks like evidence of serious interest on the part of both cold war superpowers. But [John] Wilhelm ["a longtime friend and former neighbor of mine in Washington," former Naval intelligence officer "through the Cuban Missile Crisis," Time Magazine science correspondent and author of *The Search for Superman*] isn't so sure. This is a very murky area," he told me. "Even after years of looking at it, I can't be sure that all this wasn't for disinformation." In other words, although true believers get excited about this government activity—surely it means something if top security officials are committing money to studies—it could all have been to throw the other side off the trail and make them waste time and resources. It may be significant the CIA closed the remote viewing program in 1995, with a report that concluded the results were disappointing. Would the program have been shut down if the Soviet Union were still in business? And what would an answer to that question mean?

This is Moreno's weakest argument. In approximately five paragraphs, Moreno dismissed over fifty years of EMR weapons development. As explained above, it is doubtful that this is all just disinformation by the Russian and the U.S. governments. Moreno failed to mention key information such as the following. The 1984 BBC TV documentary, *Opening Pandora's Box*;

The Soviets started bombarding the American Embassy in Moscow with a directional microwave beam with a mix of frequencies ranging from 2.5-4.1 GHz (gigahertz) in 1953 and the US government funded Project Pandora to find out why. Project Pandora was "a top secret multimillion dollar program." Top scientific experts were consulted by the American Government "about the meaning of microwaving" of the Moscow Embassy. "Five presidents kept it secret." President Johnson complained to the Soviet Premier Kosygin who claimed that he was unaware of the signal and would be sure that it was turned off.

Officially the Soviets did not admit that they were microwaving the Embassy. But the bombardment of the Moscow Embassy continued. It began in 1953 and in 1975 the signals changed with lower power signals.

A May 22, 1988 AP article *The Zapping of an Embassy: 35 Years Later, The Mystery Lingers* by Barton Reppert reported; "In 1976 Secretary of State Henry A. Kissinger tells a news conference that "this issue is a matter of great delicacy which has many ramifications." He declined to go into detail. . . . In 1988, microwave signals in the 5-11 GHz range continue to be detected at the Moscow embassy . . .the State department reported."

Moreno mixed remote viewing, psychotronics, electromagnetic radiation (EMR) bioeffects and brain signaling research, parapsychology and the Russian bombardment of the US embassy with microwaves from the 1950s through the 1980s, into one category. He compares this category with a known conspiracy theorist, i.e. retired Pentagon analyst and Army officer named Thomas E. Bearden whose facts and information are known to be questionable. Then Moreno concluded there doesn't seem to be a threat of mind control weapons.

Moreno compared the above information with Thomas Bearden's conspiracy theories, making Moreno's argument superficial, incomplete and disingenuous. Moreno dismissed all of this documentation with the very publicly discredited CIA remote viewing program which was closed down in 1995. Moreno concluded it is probably all disinformation. This is flawed and superficial reasoning upon which to make the conclusion that Moreno unequivocally makes: there are no current secret government mind control programs to worry about.

Moreno argued that EMR weapons have never been used and the former Soviet Union did not use any terrible weapons of mass destruction. But it is common knowledge in the

disarmament and arms control community that deploying powerful new weapons creates all kinds of new problems, such as proliferation, or the possibility of the same weapon ending up in the hands of our enemies. An article in the Washington Post October 6, 2005 *William M. Arkin on National and Homeland Security, Microwaves, Lasers, Retired Generals For Sale* explained;

. . . Highly controversial directed energy weapons have been pushed for almost two decades as the next silver bullet. It's been two decades because along the way, they have run into complications, some having to do with the technology itself -- aim and controllable effects, compact power sources, military ruggedness -- but mostly their problem has been moral principles. Military leaders have been concerned about legality. Commanders have been hesitant or skeptical about new technologies with uncertain effects.

. . . All during the 1990's, money flowed into continued development of directed energy weapons, but frankly not much happened. Everyone talked about an E-bomb being used in Iraq in 2003, but once again for a variety of technical and ethical reasons, and because the real world intervened, the silver bullets remained on laboratory benches or in the world of "black" super-secret contracts, waiting for an opportunity. . . .

. . . The introduction of a completely new weapon -- particularly one that could cause excruciating pain, blindness, and hearing loss -- requires the most deliberate process, and the unintended consequences -- humanitarian, public relations, the possibility of the same weapon ending up in the hands of our enemies -- needs to be carefully weighed. The United States may indeed have within technological reach the ability to disperse rioters with a beam and not a bullet, and it might be able to cripple a modern society with the push of a button, but then again, so too does the United States possess the technology to turn Baghdad into a radiating ruin.

In his 2005 book, *Code Names: Deciphering U.S. Military Plans, Programs, and Operations in the 9/11 World*, Arkin wrote of the persisting evidence of national security's authoritative unrestricted position in the U.S. government today, a power that has trumped all U.S. laws. Arkin also warned, "[There are] ...capabilities being developed to go beyond nuclear weapons in cyber-warfare and directed-energy weaponry to nullify enemy weapons- perfectly logical on the one hand, but potentially destabilizing if Russia or some other nuclear power ever perceived that they were part of a "first strike" program." This national security argument will effectively keep EMR mind control weapons classified.

It can be argued that the Soviet Union collapsed in 1989 and would not have used it's weapons against anyone, as Moreno suggested. EMR mind control weapons have been compared to the atomic bomb and the atomic bomb has not been used since the initial

bombings in Japan. This is in part because of a principle of war called 'proportionality'; that only the weapons necessary to complete the military task are used, i.e. no overkill. Moreno wrote that Russian mind control weapons were 'highly disputed' and technical capabilities of the weapons were not known. The history of EMR weapons development supports an alternative viewpoint that advanced EMR mind control weapons may exist. The weapons are known to be heavily classified throughout the Cold War and now into the post Cold War. Moreno's omission is serious and the public is misled with Moreno's false sense of security.

## **Section 12 A global EMR arms race: U.S. with Russia, China and India catching up**

The post Cold War classified EMR arms race emerged with the monumental break up of the Soviet Union and is spreading to China and India while new U.S. military policy and doctrine includes EMR weapons and warfare. Below is a brief summary of V.N. Lopatin's dedicated ten years of Russian legislative work on banning EMR mind control weapons. Like Becker, the former Russian duma member, Lopatin warned the public about new and powerful EMR weapons. For over ten years, Lopatin has been prominent and influential in the Russian government. He has taken this cause to the UN. Lopatin has a law degree and is currently the director of a large private firm in Moscow.

Lopatin's 1999 book *Psychotronic Weapons and the Security of Russia* is available at the UC Berkeley library and included an outline of the threat of psychotronic weapons and war and the importance of public relations concerning this global threat. Psychotronic weapons include EMR weapons which target the brain and nervous system. Lopatin wrote of the proposed Russian federal law '*Informational-psychological safety*' concerning the protection and defense of rights and lawful interests of citizens and society.

There have been very few advocates such as Lopatin who advocate for control of the new weapons. There are very few unclassified sources of information on Russian EMR mind control weapons. The scarcity of reliable information and heavy classification for over fifty years are further indications that EMR mind control weapons are a substantial national security issue.

Mr. Lopatin, is mentioned in two unclassified government documents received under a freedom of information act request. A [Moscow Russian Public Television](#) program on October 6, 1995 entitled *Man and Law, Scientists Discuss Mind Control Technology* included an interview of Lopatin;

*State Duma expert Yuriy Lopatin calling for legislation banning illegal development and sale of mind-control devices.*

. . . A State Duma expert, Yuriy Lopatin says: "Psychotronic Technology is spreading illegally. A law banning the illegal development, production, retailing, and spreading of psychotronic devices which influence the minds

and behavior of citizens is badly needed." He goes on to say: "The use of the mass media for psychological experiments should be banned and all the state-ordered research in human genetic experiments should be strictly registered." This was approved by Georgiy Georgiyevich Rogozin, first Deputy Head of the Presidential Security Service.

The following Russian article excerpt discussed Lopatin's ten year work to ban EMR mind control weapons. February 11, 2000, Segodnya, *The Riders of the "Psychotropic" Apocalypse* by Andrei Soldatov;

. . . The Russian deputies intend to discuss the draft law on information security in the country. This decision arose from the fact that the US allegedly created alot of devices, which can destroy information systems in Russia and influence the population.

According to Segodnya, currently the Duma is actively discussing the draft law on the information-psychological security submitted by Vladimir Lopatin. It is possible that the fruit of ten years of work (the works on the draft law began in 1990) will be discussed in the first reading in April.

. . . Such laws have never been discussed in any country. But this fact does not embarrass the deputies because they discovered that the enemy, which threatens Russia in this sphere, is dreadful and powerful. Secret methods of information-psychological influence can not only harm a person's health, but also lead to "the loss of people's freedom on the unconscious level, the loss of capability of political, cultural and other self-identification, manipulations with social consciousness" and even "the destruction of a common informational and spiritual integrity of the Russian Federation".

Finally, Lopatin's legislation was signed into law. As reported in January 29, 2005, Los Angeles Times, *Giving Until It Hurts*, by Kim Murphy;

. . . In 2001, President Vladimir V. Putin signed into law a bill making it illegal to employ "electromagnetic, infrasound . . . radiators" and other weapons of "psychotronic influence" with intent to cause harm. An official note attached to the bill said Russian scientists were trying to create "effective methods of influence of humans at a distance.

An excerpt from Military Review, September-October 1999, *Human Network Attacks* by Mr. Timothy L. Thomas, is posted on the FMSO website at <http://fmso.leavenworth.army.mil/>. This is one of many articles by Thomas in which he reported that major nations are developing classified EMR weapons. One article detailed the alleged U.S. and Russian mind control victims. Mr. Timothy L. Thomas is a military

analyst at the US Army, Department of Defense, Foreign Military Studies Office, (FMSO), Fort Leavenworth, Kansas;

China and Russia, in addition to studying hardware technology, data processing equipment, computer networks and 'system of systems' developments, have focused [on] 'new-concept weapons,' such as infrasound weapons, lasers, microwave and particle-beam weapons and incoherent light sources. . . . The Chinese military apparently believes these devices will be used in future war since its doctors are investigating treatment for injuries caused by special types of high-tech or new-concept weapons.

In the past half century the potential for working on the consciousness, psyche or morale of a person, society or the composition of an armed force has grown dramatically. One of the main reasons is the considerable success achieved by many countries in their systematic research in the areas of psychology, psychotronics, parapsychology, other new psychophysical phenomenon, bioenergy, biology and psy-choenergy in the fields of security and defense.

. . . In fact, the information-psychological factor is so important to the Russian military that it considers the information-psychological operation as an independent form of military activity.

Thomas no longer writes about mind control weapons or victims but discussed Lopatin, his book and background in Russian information warfare in the 2004 book, *Information Operations: Warfare and the Hard Reality of Soft Power: A textbook produced in conjunction with the [US] Joint Forces Staff College and the National Security Agency*. Thomas and Lopatin continue to be quoted and are respected experts on this issue. The book was described by the publisher as; “Conceived as a textbook by instructors at the Joint Command, Control, and Information Warfare School of the U.S. Joint Forces Staff College and involving IO experts from several countries, this book fills an important gap in the literature by analyzing under one cover the military, technological, and psychological aspects of information operations.” The book described Thomas;

Tim Thomas, Foreign Military Studies Office, Ft. Leavenworth, KS. LTC Thomas, US Army (Ret.) is a regular guest speaker for the JFSC JIWSOC and JIWOC sessions as well as a nationally recognized expert on Russia and Chinese IW doctrine. He was the featured speaker at the latest Information Warfare Convention 2000 in Washington, D.C. and contributed mostly to the Russian IW section.

## China's EMR weapons and information war plans

Mary C. FitzGerald is a research fellow at Hudson Institute and author of a chapter in the book entitled, *China's New Great Leap Forward, High Technology and Military Power in the Next Half Century*, Hudson Institute, 2005. In the chapter entitled China's Evolving Military Juggernaut, FitzGerald wrote about the prominence of electromagnetism to future warfare;

Page 36-7 According to General Xiong Guangkai, deputy chief of the PLA General Staff, The "revolution in military affairs" was first translated into Chinese as the "military revolution." With a deepening understanding of the matter and specifically considering China's realities, however, "We thought that it would be more precise to translate this term into Chinese as "military changes" These "military changes" including the following: . . . Battlespace is multidimensional. With the widespread application of science and technology in the military field, the battlespace is expanding from the traditional three dimensions of land, sea and sky to the five dimensions of land, sea, sky, space and electromagnetism.

Page 45 As cerebiology, biology, physics, chemistry, mathematics, electromagnetism, and related integrated applied technologies develop, the confrontation between two enemies may develop into a direct confrontation that deeply penetrates the mental activities of both sides.

In the November 7, 2005, Defense News, *Facing China's Quiet Juggernaut*, Mary C. FitzGerald described the U.S./China EMR arms race;

Early this year, Chinese Defense Minister Cao Gangchuan called on the People's Liberation Army (PLA) to harness cutting-edge military technologies, to enhance strategic and basic research, and to make breakthroughs in key technologies in a bid to "leap forward in the armaments development drive." Comrade Cao also was announcing to the world that China's economy had advanced sufficiently in technological sophistication to ensure that it could focus on 21st-century weaponry. We are now on notice, as Russian military officials have warned, that China's ultimate objective is to achieve global military-economic dominance by 2050. This must be reflected in the current U.S. Quadrennial Defense Review. . . .

Besides modernizing its conventional armed forces, today's China focuses on three military priorities: Aerospace, Nuclear weapons, "New-concept weapons" such as laser, electromagnetic, plasma, climatic, genetic and biotechnological. The central principle driving the modernization of national defense is reliance on science and technology to strengthen the armed forces. The ultimate objective of this particular revolution in military

affairs, say the Chinese, is to build a capacity to win the future "information war"- which can only be won by achieving space dominance. The core of ongoing Chinese military reforms thus consists in developing those specific symmetrical and asymmetrical systems designed to neutralize today's U.S. technological superiority in the space-information continuum.

### **India is developing EMR weapons**

The Hyderabad edition of the daily newspaper Deccan Chronicle dated January 7, 2006, page 5 reported details of Dr. M. S. Rao's keynote address at the Forensic Science Forum as part of the 93rd Indian Science Congress. The article was entitled *Tools to Trick Bomber's Minds*. Dr. Rao is Chief Forensic Scientist, Directorate of Forensic Science, Government of India, Ministry of Home Affairs. He spoke of government interest and funding of EMR mind control tools for fighting terrorism. Dr. Rao stated, "This technique of using electromagnetic radiation can control the mind of the suicide bomber and make him to leave his target place silently without making any effort to explode the bomb at the given area." Mr. Rao added, "We don't have this technique available right now. We have to adopt the technology." India's top forensic scientist also discussed "target oriented low frequency portable electromagnetic radiation tools, which could remotely be used by criminal on a person's body parts and create havoc in respect of brain damage, heartache, kidney failure, liver damage."

### **U.S. military policy and doctrine; control of the Earth's electromagnetic spectrum and "Controlled Effects"**

Here are two examples of current and near future U.S. pentagon policy and funding on EMR and information warfare, (the categories where mind control weapons are usually listed under).. This illustrates the prominence that EMR weapons are predicted to have in future U.S. and major nation's weapons arsenals. November 23, 2006 Sunday Herald, *America's War on the Web* by Neil Mackay;

. . . In 2006, we are just about to enter such a world. This is the age of information warfare, and details of how this new military doctrine will affect everyone on the planet are contained in a report, entitled The Information Operations Roadmap, commissioned and approved by US secretary of defense Donald Rumsfeld and seen by the Sunday Herald.

The Pentagon has already signed off \$383 million to force through the document's recommendations by 2009. Military and intelligence sources in the US talk of "a revolution in the concept of warfare". The report orders three new developments in America's approach to warfare: . . . Thirdly, the US wants to take control of the Earth's electromagnetic spectrum, allowing US war planners to dominate mobile phones, PDAs, the web, radio, TV and other forms of modern communication. That could see entire countries denied access to telecommunications at the flick of a switch by America.

Freedom of speech advocates are horrified at this new doctrine, but military planners and members of the intelligence community embrace the idea as a necessary development in modern combat.

. . . Next, the Pentagon focuses on electronic warfare, saying it must be elevated to the heart of US military war planning. It will "provide maximum control of the electromagnetic spectrum, denying, degrading, disrupting or destroying the full spectrum of communications equipment it is increasingly important that our forces dominate the electromagnetic spectrum with attack capabilities". Put simply, this means US forces having the power to knock out any or all forms of telecommunications on the planet.

. . . After electronic warfare, the US war planners turn their attention to psychological operations: "Military forces must be better prepared to use psyops in support of military operations." The State Department, which carries out US diplomatic functions, is known to be worried that the rise of such operations could undermine American diplomacy if uncovered by foreign states.

The second example is a 2004 U.S. Air Force doctrine entitled *Controlled Effects, Scientists Explore the Future of Controlled Effects*. Notable is the description of remote targeting of "Controlled Personnel Effects" using EMR technologies anywhere in the world via satellite in the near future. The full document is cited in section 5.

### **Section 13 Cold War/post Cold War weaponeers culture: how the government cover story is so successfully carried out**

Moreno saw no reason to discuss the significant role of the Cold War scientific culture in allowing and perpetuating past illegal national security experiments. His book is meant to be an introduction and brief overview and this probably accounts for Moreno's failure to explore the science culture surrounding brain research and national defense.

At least the problem should be mentioned in light of past serious misconduct. Pulitzer prize-winning reporter Eileen Welsome testified before a 1994 congressional hearing, *Radiation Testing on Humans* about the difficulties she encountered with the Atomic Energy Commission (AEC) in uncovering her story on eighteen Americans injected with plutonium between 1945 and 1947 in radiation experiments. Her news accounts led to the public exposure of radiation experiments in the early 1990s. In her 1999 book, *Plutonium Files, America's Secret Medical Experiments in the Cold War*, Welsome described that the 1995 Advisory Committee on Human Radiation Experiments, (ACHRE) "conclusions were weak and fail to come to terms with many of the controversial studies." Welsome explained that the Cold War culture surrounding radiation experiments is largely overlooked or ignored.

Also, unknown to the public, systematic tactics were used to successfully carry out the government cover story of only heating effects and no proven bioeffects from EMR. The very same utilitarian culture described by Welsome is present in the Cold War and post Cold War EMR scientific culture and is documented in detail in the next section. The methodical and systematic tactics are hard to believe but well documented and were very successful in promoting the atomic bomb, preventing costly lawsuits from radiation exposure and questionably, protecting national security. Welsome's description provided a key explanation for how the U.S. government's national security science policy is actually carried out. Welsome wrote;

Many scientists couldn't accept the idea that they or their peers had committed any wrongs. They maintained their belief that the ends they had pursued justified the means they used, expressed little or no remorse for the experimental subjects, and continued to bash . . . the media for blowing the controversy out of proportion. . . . A few of the experiments increased scientific understanding and led to new diagnostic tools, while others were of questionable scientific value . . . [There was a] pervasive deception that the doctors, scientists, and military officials routinely engaged in even before the first bomb had been detonated. General Leslie Groves [head of the Manhattan Project to build the first atomic bomb] lied egregiously when he testified to Congress in 1945 about radiation effects of the bomb.

"A pleasant way to die," he said-fully aware of . . . [what happened to the Japanese victims and in a fatal laboratory accident.] Stafford Warren [director of the Manhattan Project's Medical Section] downplayed the fatalities and lingering deaths in Japan. . . . During the war, the bomb makers believed that lawsuits would jeopardize the secrecy of the project.

After the war they worried that lawsuits would jeopardize the continued development of nuclear weapons . . . The weaponeers recognized that they would have to allay the public's fear of atomic weapons in order to keep the [US plutonium] production plants operating . . . This meant an aggressive propaganda campaign about the "friendly atom" and the suppression of all potentially negative stories about health hazard related to atomic energy . . .

AEC officials routinely suppressed information about environmental contamination caused by weapons plants . . . The fact is, the Manhattan Project veterans and their protégés controlled virtually all the information. They sat on the boards that set radiation standards, consulted at meetings where further human experimentation was discussed, investigated nuclear accidents, and served as expert witnesses in radiation injury cases.

There are indications that the Cold War scientific culture is continuing in the new weapons programs which are described as a similar secretive and powerful scientific culture. In a September, 21, 2005 Washington Post article *Commandos in the Streets?*, William Arkin described extreme secrecy surrounding secret weapons and possible illegal acts;

Further, Granite Shadow posits domestic military operations, including intelligence collection and surveillance, unique rules of engagement regarding the use of lethal force, the use of experimental non-lethal weapons, and federal and military control of incident locations that are highly controversial and might border on the illegal. Both plans seem to live behind a veil of extraordinary secrecy because military forces operating under them have already been given a series of "special authorities" by the President and the secretary of defense. These special authorities include, presumably, military roles in civilian law enforcement and abrogation of State's powers in a declared or perceived emergency.

A September 29, 2005, New York Times article by Douglas Jehl, *Republicans See Signs That Pentagon Is Evading Oversight*, reported a lack of legislative and executive oversight and accountability for secret weapons programs;

Republican members of Congress say there are signs that the Defense Department may be carrying out new intelligence activities through programs intended to escape oversight from Congress and the new director of national intelligence. . . . The lawmakers said they believed that some intelligence activities, involving possible propaganda efforts and highly technological initiatives, might be masked as so-called special access programs, the details of which are highly classified. The report said the committee believed that "individual services may have intelligence or intelligence-related programs such as science and technology projects or information operations programs related to defense intelligence that are embedded in other service budget line items, precluding sufficient visibility for program oversight." "Information operations" is a military term used to describe activities including electronic warfare, psychological operations and counterpropaganda initiatives.

The October 6, 2005, Washington Post article, *National and Homeland Security Microwaves, Lasers, Retired Generals For Sale* by William Arkin described the top defense corporations, the highest military leaders, Pentagon officials and advisors, all of whom work closely to oversee new weapons developments. They set the policies, make the major decisions and control all of the information. The pattern of an old boys network, power, the influence of money and conflict of interest are apparent;

Friend's tell me that this week's Association of the United States Army (AUSA) Annual Meeting & Exposition at the Washington Convention Center was all that an orgy of self-congratulation can be. Contractors galore, beltway bandits, luncheons, awards, howitzers, all topped off with a speech by Dick Cheney.

. . . This week, for example, one of my favorite directed energy patrons -- retired General Ron Fogleman -- received appointments at two corporations, as a "senior advisor" to the Galen Capital Group, LLC; and as a member of the board of advisors of Novastar Resources.

The former chief of staff of the Air Force is a military-industrial legend, head of his own consulting company Durango Aerospace Inc. with a client list that includes Boeing, FMC, Northrop Grumman, Raytheon, and RSL Electronics.

A quick check on the web shows that Fogleman also serves on the boards of no fewer than 14 corporations: AAR Corp, Alliant Techsystems, IDC, Mesa Air Group, MITRE Corporation, Rolls-Royce North America, Thales-Raytheon Systems, First National Bank of Durango, International Airline Service Group, ICN Pharmaceuticals, DERCO Aerospace, EAST Inc., World Airway, and North American Airlines. He is also Senior Vice President of something called Projects International, a DC consultancy and is or was a partner in Laird and Company, LLC. And he is a member of Donald Rumsfeld's Defense Policy Board Advisory Committee, on the NASA Advisory Council, the Jet Propulsion Laboratory Advisory Board, chairs the Falcon Foundation and the Airlift/Tanker Association. This guy is busy!

Fogleman gave up the job as the most powerful man in the Air Force on principle when he could no longer serve Secretary of Defense William Cohen. Since leaving, however, he has dispensed so much wisdom one wonders how much principle could be left.

One of Fogleman's first jobs upon leaving the Air Force was to chair the 1998 Directed Energy Applications for Tactical Airborne Combat study (known as "DE ATAC") which identified 65 concepts, particularly microwave weapons, selecting 20 for further analysis. The laboratory then awarded short-term concept development contracts for the five most promising to Boeing, Lockheed Martin, Coherent Technologies, and Sanders. All during the 1990's, money flowed into continued development of directed energy weapons, but frankly not much happened. Everyone talked about an E-bomb being used in Iraq in 2003, but once again for a variety of technical and ethical reasons, and because the real world

intervened, the silver bullets remained on laboratory benches or in the world of "black" super-secret contracts, waiting for an opportunity.

And with the quagmire in Iraq, that opportunity came. So it just a coincidence that Fogleman's company Alliant Techsystems was awarded a contract earlier this year to develop the Scorpion II high powered microwave weapon "capable of defeating improvised explosive devices (IEDs) currently threatening U.S. and allied troops in Iraq." Maybe Fogleman had nothing to do with the directed energy work already flowing to Boeing and Raytheon. . . .

#### **Section 14 Scientific con game II: EMR bioeffects scientific evidence but no theory and no mention that the theory could be classified**

The public rarely has access to a balanced argument on the EMR bioeffects controversy. EMR bioeffects scientific uncertainty still exists after fifty years of the remarkable development of EMR technologies and industries, beginning with military radar in the 1940s and continuing with the cell phone and power line EMR industry today. EMR scientific uncertainty can be shown to be a result of industry and government inactions and policy. Simply put, the U.S. military want to keep EMR weapons secret and the EMR industry want to fight off lawsuits over any possible EMR health effects.

During the Cold War era, the government's cover story was there are 'no scientifically proven EMR bioeffects so there are no EMR weapons.' The public relations message of the cell phone and power line industry, i.e. the EMR industry was that there are 'no proven EMR bioeffects effects so there is no EMR public health risk.' Both have been exceptionally successful. Largely unknown to the public, methodical and systematic tactics were used to carry out these public relations campaigns. The same methodical and systemic tactics were employed by the tobacco companies and also as Welsome described, by the atomic bomb weaponeers.

By examining the tobacco company documents today, the misleading scientific tactics of the tobacco company executives and the atomic bomb scientists can be clearly seen. Utilitarian decisions were made in order to continue to sell cigarettes and make profits in spite of known health effects from smoking. Government documents on atomic radiation health effects today unequivocally illustrated that top scientists and government officials intentionally made decisions based on questionable national security goals in spite of known health consequences from exposure to radiation.

The question becomes whether as a democracy, we want to allow this pattern continue in the name of national security. The evidence is clear that the systematic and misleading government scientific tactics are continuing today. The denials from some experts that there are no health risks from EMR and there are no EMR weapons to worry about, have completely overpowered any counterargument. There is also a new post Cold War, patronizing and paternalistic campaign by some top scientists to stop 'bad' or fringe

science and to save government money on needless EMR bioeffects research based on the claim that health effects have not been conclusively demonstrated. This campaign is extremely disingenuous, dishonest and unconscionable, given the known EMR bioeffects history which these scientists fail to mention. The counterargument and evidence today is undeniable but top scientists still deny vigorously and some use personal attacks rather than arguing on the scientific merits. This is science at its worst.

It will be up to the public to recognize these misleading scientific tactics and the overwhelmingly powerful scientific culture. Top scientists such as the atomic weaponeers lied egregiously about radiation exposure health effects. Any trust in public and government officials has been lost and ought to be continuously questioned. In the case of EMR weaponeers, exposure of any ongoing unethical behaviors and the weak rationalization that this behavior is necessary for national security does not hold up in a democracy. Certainly, cigarette company executives and scientists who conducted the nonconsensual radiation experiments have not been judged harshly enough for the large numbers whose health was affected.

There seems to be an unintended outcome of the new public campaign to close down the EMR bioeffects research effort based on the premise that EMR bioeffects or health effects have not been conclusively demonstrated. The research will for the most part be conducted as classified research, as it has since the 1960s. As a result, the public will continue to be unaware of the very classified EMR mind control weapons and the possible EMR health effects from the cell phone and power line exposure.

There is so much at stake for the cell phone industry, the power line industry and for the public. Because the EMR bioeffects weapons research has been heavily classified since the 1960s and there is no detailed publicly known EMR mind control weapons theory and probably never will be, the EMR bioeffects controversy for cell phones and power lines is important to understand. Note that EMR weapons research is almost completely ignored in the EMR public health debate, even though the weapons research has greatly increased the scientific uncertainty surrounding EMR bioeffects research. The U.S. government and the EMR industry's suppression and control of EMR research can be documented, understood and challenged.

### **Scientific evidence of EMR bioeffects but no scientific theory**

The 2004 book, *Bioelectromagnetic Medicine* edited by Dr. Paul J. Rosch and Dr. Marko S. Markov illustrated that the growing evidence and interest in nonthermal bioeffects of EMR is continuing. Dr. Rosch wrote the following excerpt on the few trailblazers in the field of bioelectromagnetic medicine, including Dr. Ross Adey and Dr. Robert O. Becker.

In the decade to come, it is safe to predict, bioelectromagnetics will assume a therapeutic importance equal to, or greater than, that of pharmacology and surgery today. With proper interdisciplinary effort, significant inroads can be made in controlling the ravages of cancer, some

forms of heart disease, arthritis, hormonal disorders, and neurological scrounges such as Alzheimer's disease, spinal cord injury, and multiple sclerosis. This prediction is not pie-in-the-sky. Pilot studies and biological mechanisms already described in primordial terms, form a rational basis for such a statement- J. Andrew L. Bassett, 1992

Andy Bassett was one of the early advocates of the use of electromagnetic fields for uniting fractures that refused to heal. Unfortunately, he died before he could see that his prophecy would come true well ahead of schedule. In many respects this book is a tribute to him and other pioneers such as Bob Becker, Abe Liboff, Bjorn Nordenstrom, and Ross Adey who recognized the vast potential of bioelectromagnetic medicine and have helped to put it on a solid scientific footing.

The International Encyclopedia of Neuroscience, Third Edition; B. Smith and G. Adelman, editors, Elsevier, New York featured a 2003 paper by W. Ross Adey entitled *Electromagnetic fields, the Modulation of Brain Tissue Function-a Possible Paradigm Shift in Biology*. The article described one of the very few general theories for EMR bioeffects;

Although far from a consensus on mechanisms mediating these low-level EMF sensitivities, appropriate models are based in nonequilibrium thermodynamics, with nonlinear electrodynamics as an integral feature. Heating models, based in equilibrium thermodynamics, fail to explain a wide spectrum of observed nonthermal EMF bioeffects in central nervous tissue. The finding suggest a biological organization based in physical processes at the atomic level, beyond the realm of chemical reactions between biomolecules. Much of this signaling within and between cells may be mediated by free radicals of the oxygen and nitrogen species. Emergent concepts of tissue thresholds to EMF sensitivities address ensemble or domain functions of populations of cells, cooperatively “whispering together” in intercellular communication, and organized hierarchically at atomic and molecular levels.

The 1987 book, *Electromagnetic Fields* by B. Blake Levitt, who wrote for the New York Times stated on page 387;

The nonionizing band of the electromagnetic spectrum will probably turn out to be far more significant than anyone heretofore imagined. There is a distinct possibility, for instance, that entrainment phenomenon, resonance relationships, and other reactions to nonionizing electromagnetic fields will prove to be a critical but hidden, variable in all scientific research . . .

Louis Slesin is the editor of the trade publication, *Microwave News*, one of the few sources for EMR bioeffects research. His website, [www.microwavenews.com](http://www.microwavenews.com) described his work;

For more than 25 years, Microwave News has been reporting on the potential health and environmental impacts of electromagnetic fields and radiation. We are widely recognized as a fair and objective source of information on this controversial subject. . . .

Microwave News is independent and is not aligned with any industry or government agency. Our income used to come from subscriptions and sales of our publications and from advertising. Today, in addition to ads on our Web site, we depend on contributions from our readers.

Microwave News covers the entire nonionizing electromagnetic spectrum, with special emphasis on mobile phones and power lines, as well as radar and broadcast towers. . . .

Microwave News is...

“Meticulously researched and thoroughly documented.”

-Time Magazine

“Influential and Pioneering.”

-The New Yorker

“The most authoritative journal on ELF fields and health.”

-Fortune

“Widely read and influential.”

-ABC News 20/20

“The world's most authoritative source on EMF health risks.”

-Washington Journalism Review

“Influential.”

-The Hartford Courant

“Your best source on this topic.”

-The Village Voice

“Research is moving so fast in this field that newsletters are the only way to keep up. Microwave News and VDT News, both edited by Louis Slesin, are widely acclaimed by all sides as the best sources of reliable and current information.”

-Whole Earth Catalog

In Slesin's article entitled, *The Science and Politics of the EMF Puzzle; The Missing Pieces in the Frontline Story*, he made this important point. “In the absence of detailed studies on breast cancer, Alzheimer's disease and depression, among other common health problems, no one knows how great the EMF health risk really is.” He argued; “The significance of the epidemiological studies is not that they point to a cancer epidemic. But they raise the question: If EMFs can cause even a small change in cancer rates, what other biological effects could they have?”

A February 1985 Omni magazine article *Mind Fields* by Kathleen McAuliffe included an interview of science historian Nicholas Steneck who summarized the scientific uncertainty surrounding EMR bioeffects research;

Science historian Nicholas Steneck published the [1984] book, *The Microwave Debate*. Steneck acknowledges that two thirds of all support for research on biological effects of microwaves and radio waves comes from the military, “which cannot be viewed as a disinterested party when it comes to making decisions about development versus health. Groups with a vested interest in the use of electromagnetic technologies are proving to be a formidable force in shaping public health policies. . . . basic research in this area has barely crept forward, with investigators under constant fire for challenging accepted ideas. According to psychobiologist Rochell Medici, who stood at the vanguard of brain EMF studies in the early seventies, “It is as though scientists had retreated from doing challenging, frontier studies because such research engendered too much controversy or elicited too much criticism.” The upshot of all this: We now lack a scientific framework needed to make sense of the diverse range of EMF health effects being reported in ever-increasing numbers.”

In the February 1985 Omni magazine article, Becker explained the scientific uncertainty of EMR bioeffects research at the international scientific level;

Dr. Becker, an outspoken critic of the government’s position on EMF health risks, takes another view. “. . . the truth of the matter is that this country simply chose to overlook hazards in this area. Take a glance at the Russian literature, and you’ll find literally thousands of reports of harmful effects at exposure levels the United States government assures us are safe.” Becker is referring to one of the most bizarre contrasts in the history of modern science. The Russians and the Americans have radically different standards regarding acceptable levels of EMF emissions. The Russian safety standard is 1,000 times below the U.S. standard. Given the lack of data in the West about the effects of low-intensity radiation, you would think these grave assertions might at least trigger some worries. Yet once again the reports were greeted as the extravagant claims of a careless school of science. . . .

“Sure, it’s easy to pick flaws in individual studies. Because there’s been practically no funding for epidemiological investigations, the researcher that did them have invariably been operating on a shoestring. Still if you look across the world literature, I think any rational individual would have to conclude that we’ve got one hell of a problem.”

The World Health Organization (WHO) sponsored an international conference, *Electromagnetic Fields and Human Health - Fundamental and Applied Research*. Russian scientists offered steps towards reaching a global agreement on EMF standards including, "To recognize officially the presence of a non-thermal mechanism of biological action of EMF RF at low intensities of less than 1 millW/cm<sup>2</sup>." A February 2003 report by Vladimir N. Binhi, theoretical physicist and head of the Russian Academy of Sciences in Moscow, entitled *Electromagnetic Fields and Human Health*, explained the lack of a scientific theory for EMR bioeffects;

. . . non-thermal effects are real. . . there is no recognized physical theory for those effects that could help to establish right electromagnetic safety standards. . . The U.S. standards and those proposed by WHO are 100 times more lenient, depending on frequency range, than Russian standards, which are based on the observed biological effects of chronic EM exposures.

The February 1985 Omni magazine article quoted Slesin on the lack of EMR funding;

"Every study that has been done to date has been blunted by lack of sufficient funds to do it properly or by the inability to get all the data on a specific population," he says. "I think it is extraordinary that the government has never funded a major epidemiological study. This is a major, serious omission."

A 1990 Time magazine article quoted Slesin on the continued lack of scientific studies of EMR bioeffects research;

In his opinion, the studies linking higher incidences of cancer to low-frequency electromagnetic fields raise questions about the whole electromagnetic spectrum, including radiation from such ubiquitous sources as broadcast antennas walkie-talkies and cellular telephones. But despite all the warning signs, there has been almost no research on the effects of long-term, low level exposure. "the U.S. has gone to extraordinary lengths not to study this problem," says Slesin. "It's as if we're terrified of what we might find out."

Slesin concluded that the EMF scientific uncertainty is a result of industry and government inactions and policy. Slesin explained, in the Microwave News article, *The Science and Politics of the EMF Puzzle; The Missing Pieces in the Frontline Story*. This article analyzed Jon Palfreman's television program *Frontline, Currents of Fear*. The full article is posted here at <http://microwavenews.com/front.html>. Slesin wrote, "As Julie Larm, one of the mothers on the show, wrote to Palfreman on behalf of Omaha Parents for the Prevention of Cancer after the June 13 [1995] PBS broadcast, "May God help you if you're wrong."

The reason the EMF problem has attracted so much attention is not because of pressure from the scientific community. It is the public that has propelled EMFs into the limelight. The Omaha housewives whose children have cancer want answers, as was shown on Frontline. Palfreman portrayed them as naïfs [misspelled in original] who have been brainwashed by Paul Brodeur [Brodeur wrote the 1977 book *Zapping of America: Microwaves, Their Deadly Risk and Cover-Up* about the dangers of microwave radiation from radar, television, telephone, satellite communications and other sources of EMR. Brodeur was a New Yorker staff writer.] This is unfair because they have legitimate concerns and because they are victims of the scientific uncertainty that is a result, in large measure, of years of industry and government foot-dragging.

### **A bully pulpit and a top scientist**

Robert Park was the first spokesman for the office of public affairs of the American Physical Society (APS) in Washington DC. He has written opinion columns for the New York Times and is a chairman of the Department of Physics at the University of Maryland. Park wrote the 2000 book *Voodoo Science* which included two chapters on the EMR bioeffects controversy. Park was asked by Washington Post to review the 1989 book *Currents of Death*, a book about the dangers of EMR from power lines, computer monitors, radar stations and other sources of EMR by New Yorker staff writer, Paul Brodeur. As Slesin explains in his October 27, 2006 *News and notes*, Park's motives are not clear but it is clear that Park has presented a distorted scientific argument on EMR bioeffects for years;

October 27. . . The American press may be ignoring the cell phone-sperm story, but not so physicist Robert Park. That slayer of voodoo science wants it dead and buried. [Disclosure: We have had vehement disagreements with Park over the years, especially when back in 2001, he called Microwave News a "fear merchant" based on little more than his own self-deceptions.] In the latest edition of his weekly e-mail, What's New, Park tries to apply the coup de grâce to what's left of the story: "There is not a chance that the reported sperm counts among heavy cell phone users. . . has anything to do with cell phone radiation," he declares. Park leaves no room for any uncertainty -it's simply an impossible finding. Once again, we are struck by the ease with which Park dismisses data that do not fit his mental constructs. For Park, theory, at least his theory, always trumps experience. We were taught that scientists had an open mind and would be moved by data. Clearly, that's not always the case.

On page 148 of his book, Park discredited past EMR bioeffects research with an ad hominum attack. Park discounted the empirical scientific method of research even though this is a well accepted method of scientific research and is often used to scientifically investigate the cause of a cancer cluster or reported health effects. Park made the

erroneous statement that the microwaving of the U.S. embassy was for the purpose of activating electronic eavesdropping devices. In a 1988 AP article entitled *The Zapping of an Embassy: 35 Years Later, The Mystery Lingers* Barton Reppert stated; “Thirty-five years after security officers first noticed that the Soviets were bombarding the U.S. embassy in Moscow with microwave radiation, the U.S. government still has not determined conclusively-or is unwilling to reveal-the purpose behind the beams.” The AP article extensively detailed the complex history and controversy surrounding the issue and one can conclude it is very doubtful that Park’s conclusion is the whole story. A subsequent Westlaw database search turned up similar conclusions. When asked in an email for a citation for his statement, Park did not reply.

Meanwhile, the *New Yorker* published "Microwaves-II" in which Brodeur focused on the strange situation at the American embassy on Tchiakovsky Street in Moscow. For reasons that were a mystery at the time, the Soviets had been beaming microwave radiation at the embassy for more than a decade. It is now known that the microwaves supplied the tiny amount of power needed to operate electronic eavesdropping devices that had been concealed in the building during its construction. Brodeur, however, suspected that the microwaves were meant to addle the brains of embassy workers or induce depression. What shocked him was that the government had not warned employees of the health hazard. He noted that Ambassador Walter Stoessel had developed some . . . serious blood ailment, and two former ambassadors had died of cancer. To Brodeur it seem the microwaves must be to blame. People were exposed to microwaves and they got sick- it was belief engine at work.

A May 29, 2000, Dallas Morning News article provided an example of the misleading scientific tactic of basing a conclusion on a certainty that does not exist. Entitled, *Debunkers Shouldn't Toss Out Real Science With the Voodoo*, by Tom Siegfried, the article was a review of Park's book, *Voodoo Science*. Park also employed the scientific tactic of omission of contrary evidence. Siegfried explained how the noted physicist Robert Park used both tactics to promote the position that “nonthermal bioeffects of EMR have not been proven, only heating effects have been scientifically proven.” Siegfried cited Nature magazine research for clear proof of EMR bioeffects not caused by heating.

. . . In recent decades, defenders of science have coined various labels for "research" that transgresses science's standards. There's junk science, pseudoscience, pathological science and fraudulent science - all of them packaging nonsense in scientific-sounding rhetoric (sometimes sincerely, sometimes deliberately misleading). Physicist Robert Park lumps all these categories together in a new book titled *Voodoo Science* (published by Oxford University Press).

Dr. Park, the American Physical Society's Washington watchdog, laments the antiscientific sentiment in society today. . . .

Still, sometimes there's a thin line between defending science and suppressing it. When Dr. Park dismisses concerns over health effects from electric power lines, he is probably right - the evidence shows that the risk from power lines (and magnetic fields from appliances) has almost certainly been greatly exaggerated. Exhaustive expert analyses of a lot of research studies have found no basis for supposing that power lines cause cancer.

In debunking the alarmists, Dr. Park phrases his concerns carefully. Nevertheless some readers might conclude that the research was unnecessary, since physicists could calculate at the outset that electric and magnetic fields were too weak to cause harm.

Now, it is one thing to reject claims of perpetual motion. The second law of thermodynamics is established beyond reasonable doubt. If a loophole arises, it won't be in somebody's garage. But it's something else to infer that physics knows all the ways that magnetism can affect life.

True, a physicist might prove that a magnetic field is too weak to rupture a DNA molecule. But a quiet whisper in your ear does not produce enough energy to damage your DNA, either. Yet a whisper can make your heart beat faster and stimulate hormone secretions that can alter chemical reactions inside your cells. It's not possible to say with rock-solid certainty that magnetic fields could not influence cellular biochemistry in an adverse way. It takes real research to find out whether such effects exist and whether they are dangerous.

In any event, scientists need to remember that an unquestioned assumption can undermine otherwise sound conclusions. For example, most experts dismiss the danger of microwaves from cell phones. Phone makers say that such microwave radiation is too weak to heat up brain tissue, presumably the source of any harm."

Yet last week in the journal *Nature*, British scientists reported an intriguing experiment with roundworms exposed to several hours of similar microwaves. Sure enough, the temperature of the worms did not rise. But the worms did produce higher levels of proteins that respond to stress. In other words, something about the microwaves triggered the worms' cellular defense system."

Another article questioned Park for not maintaining a scientifically sound argument. The article is the April 2, 2002 *Ripsaw News*, Volume 4; Issue 14, *Gonzo Science; Anatomy of an Electromagnetic Anomaly* by Anonymous. This article provided a summary the fifty plus years of the EMR bioeffects controversy and the rarely heard counterargument to Park.

Robert Park's book *Voodoo Science* purports to debunk various brands of "junk science." Park identifies journalist Paul Brodeur as a champion of the "junk" or "voodoo" science idea that significant health risks are associated with electromagnetic radiation. It's curious that Park chooses to focus on Brodeur rather than two-time Nobel laureate Dr. Robert Becker. Becker's career is an awesome feat of pioneering research, and an uphill struggle against scientific and governmental stonewalling and bureaucracy. Unlike Brodeur, Becker's scientific credentials are as big as a house. Park doesn't even mention this giant in the debate, preferring to make his case that Brodeur has a kind of crusading journalist's tendency to create mountainous controversies out of factual molehills. Had Park engaged Becker's work, he would have had to argue his case wholly on its scientific merits, instead of playing what amounts to a shell game.

The idea that electromagnetic radiation can cause harm is anathema to the status quo. The U.S. military has played the leading role in keeping the lid on this modern heresy. Since the 1940s, the military has generated reams and reams of research and documents that all state unequivocally that electromagnetic radiation is by and large harmless. And not just harmless, but actually having no biological effects whatsoever.

The exception is a certain threshold at which one type of electromagnetic radiation (microwaves) causes body tissues to heat up faster than the body can dissipate this heat. But all other electromagnetic radiation, which is below this thermal level, has been officially regarded as harmless. To thank we have the more than 50 years of military research that Park defers to. However, there is also 50 years of science that shows electromagnetic radiation does indeed have biological effects below the thermal level. This flew in the face of theory in the 1940s, and according to Park it still flies in the face of theory.

The first studies to show non-thermal biological effects of microwaves were done in 1948 at the State University of Iowa, by A.W. Richardson (no relation). Richardson and his colleagues showed that high and low-power microwaves cause cataracts with no heating of the eye. Since microwaves can create bio-effects without heating, the door is wide open for other kinds of electromagnetic radiation to affect the body. . . .

## **An international bully pulpit and a top scientist**

Another top EMR science advisor violated the rules of scientific impartiality and conflict of interests. The November 13, 2006 Microwave News, News and Comment, reported;

. . . Just months after leaving his post as the head of the EMF project at the World Health Organization (WHO), Mike Repacholi is now in business as an industry consultant.

The Connecticut Light and Power Co. (CL&P), a subsidiary of Northeast Utilities, and the United Illuminating Co. (UI) have hired Repacholi to help steer the Connecticut Siting Council away from a strict EMF exposure standard. The two utilities commissioned Repacholi to prepare detailed comments to support a 100 mG level proposed by Peter Valberg of the Gradient Corp. and to rebut the state Department of Public Health (DPH), which is seeking a much tougher approach.

Repacholi's filing has been criticized for citing, and at times misrepresenting, as-yet unreleased WHO reports for the benefit of his corporate clients. Some see this as a continuation of his activities at the WHO, where Repacholi was often accused of favoring the mobile phone and electric utility industries at the expense of public health.

## **Nonthermal bioeffects EMR research should be cut back**

In the March 1, 2006 Policy Studies Organization Volume 23; Issue 2 *The Rise and Fall of Power Line EMFs: the Anatomy of a Magnetic Controversy.* (*Electromagnetic Fields*) Jon Palfreman, reported on his analysis of recent trends in global policy on EMR health effects. Jon Palfreman, PhD, is a television science journalist who has produced over 40 BBC and PBS one-hour documentaries. He is the author of two books, and an adjunct professor at Tufts University, Boston University, and Suffolk University. He is a 2006 Nieman Fellow in Journalism at Harvard University. Palfreman wrote favorably about the director of WHO's EMF project, Repacholi but failed to mention his substantial financial gains from industry connections. Palfreman argued that nonthermal bioeffects EMR research should be cut back.

. . . The controversy has grown to include not only epidemiologists, biologists, journalists, EMF activists, the utilities, and personal injury lawyers, but also electrical engineers and physicists--who feel that their expertise in electromagnetism entitles them to participate--and policymakers and social scientists who have debated the applicability of the precautionary principle to this dispute. There's a lot at stake. Some 2 million miles of power lines cross America, carrying electric power from power stations to substations and from substations to people's homes. If there is a danger, it is pervasive and expensive to mitigate. After all this

science and deliberation--culminating in numerous consensus reports--  
what has been learned?

. . . In November 2002, Mike Repacholi, head of the World Health Organization's EMF Project refused to recommend any action under precautionary principle and warned local health officials from seeking to lower the existing 100[micro]T limit. A WHO publication (WHO, 2002, p. 57) *Establishing a Dialogue on Risks From Electromagnetic Fields*, made the following revealing statement: "If the scientific community concludes that there is no risk from EMF exposure . . . then the appropriate response to public concern should be a public education program." If, on the other hand, it continues, "regulatory authorities react to public pressure by introducing precautionary limits in addition to the already existing science-based limits, they should be aware that this undermines the credibility of the science and the exposure limits."

So it would seem that there is a definite move to curtail nonthermal bioeffects research and as a result, the research would be conducted for the most part as classified research, as it has since the 1960s. And the public would continue to be unaware of the issues.

### **Distorting and controlling the public debate**

The [Microwave News](#) article, *The Science and Politics of the EMF Puzzle; The Missing Pieces in the Frontline Story* analyzed Jon Palfreman's television program *Frontline, Currents of Fear*.

The irony is astonishing. On the very day that a committee of the National Council on Radiation Protection and Measurements (NCRP) completed its 800-page draft report asking regulatory agencies to pay "serious attention" to EMFs, public television station WGBH aired a one-hour show across the country comparing EMFs to cold fusion. While the NCRP committee called for "a national commitment to further research," the June 13 [1995] *Frontline*, "Currents of Fear," asked whether it was time to close down the research effort.

The scientific inaccuracies in Palfreman's program were serious. Palfreman presented the American Physical Society's (APS), official position on EMR bioeffects, APS spokesman Park and his cited expert, physicist professor Adair. Numerous EMR studies show bioeffects other than heating and were not cited in Palfreman's program. The program did not show the many physicists who have pointed out the fallacies in the APS statements. The *Frontline* program presented the APS position that EMFs are not a health concern to the public. The APS position was based on misleading inferences as Slesin illustrated below.

## **No public criticism from the bioelectromagnetic scientific community**

Slesin explained why there has been no outcry over the *Frontline* program or the EMR bioeffects controversy by those in the bioelectromagnetic scientific community;

EMF research is an underfunded backwater of the scientific community. Before the congressionally mandated \$65 million RAPID program got under way last year, most of the available research funds came from the electric utility industry through EPRI and from the DOE, an agency not known for putting radiation safety ahead of its other program objectives. EPRI and the DOE do not look kindly on those who publicly highlight possible health risks.

This is the grubby side of science, where many researchers are as interested in securing contracts and grants—even if it means making compromises along the way—as they are in doing the actual scientific work.

## **Controlling/slanting scientific results**

In the article, *the Frontline Story*, Slesin described an example of top scientists distorting scientific facts. A department of defense JASON report was not clearly explained and a public APS conclusory statement was misleading. Slesin explained;

### **Biophysical Mechanisms of Interaction**

. . . . Whether an experiment shows an EMF effect in humans, animals or cells becomes moot if it is possible to show that such interactions are theoretically impossible: Yale University physicists Drs. Robert Adair and William Bennett believe this, and, it appears, so does Palfreman. To use the metaphor conjured up by Adair on *Frontline*, worrying about EMF health effects is akin to being concerned that a cat will damage a tree by breathing on it during a howling wind storm.

Given the recent statement by the American Physical Society (APS) that EMFs are of no concern—also cited by Palfreman on the show—one might conclude that all physicists agree with Adair and Bennett. But that would be a mistake.

There are many physicists working in the field of bioelectromagnetics. As Dr. Bill Kaune, a consultant based in Richland, WA, who has a doctorate in physics, put it: "We physicists who do research on EMFs have long been aware of the signal-to-noise problem, but, regardless of our concerns, experiments seem to show that EMFs affect living tissues. I don't see how

one can justify flatly discounting the work of a large number of epidemiologists and laboratory biologists solely on the basis of signal-to-noise calculations on highly simplified models of living tissues."

A couple of years ago, Adair had the opportunity to make his case to the JASONS, a high-level group of physicists, whose advice is routinely sought by the Department of Defense. In his report on behalf of the JASONS, Dr. Steven Koonin of Cal-tech concluded: "The essential point to take away...is that a cellular-level coupling of magnetic fields to biological systems is physically plausible and does not violate any physical principles."

Koonin was a member of the APS council that approved the statement, and may well believe that "no plausible biophysical mechanisms" have been identified. But this does not mean, as Adair and Bennett (and Palfreman) contend, that such interactions are impossible.

. . . So, the animal, cellular and human studies all point to real risks. And physics does not put them out of the realm of possibility. To be sure, these risks have not been conclusively proven—but neither have they been convincingly dismissed.

As the NCRP committee concluded in its draft report: "[F]indings are sufficiently consistent and form a sufficiently coherent picture to suggest plausible connections between ELF EMF exposures and disruption of normal biological processes, in ways meriting detailed examination of potential implications in human health."

### **Industry/government control of EMR research funding**

In Slesin's July 31, 2006 [News and Comment](#) posted on entitled "*Radiation Research and the Cult of Negative Results*" Slesin provided documentation of industry and government control of EMR research funding resulting in an overwhelming number of "no EMR bioeffects health risk" results. The article also described an example of industry/government paid EMR experts who slanted scientific studies. EMR experts testified in EMR health effects court cases although contrary to most EMR court cases, in the case below under appeal, the arbitrator ruled in favor of the sick plaintiff;

. . . Many of the negative EMF studies that have been published in *Radiation Research* were paid for by industry and the U.S. Air Force, both of which seek to control EMF research (often by stopping it) and to show that microwaves are essentially harmless except at high exposure levels. Promoting no-effect studies has long been part of their strategy to keep a lid on the microwave-health controversy.

Radiation Research is a scientific journal whose primary focus is on ionizing radiation, with only a minority of papers devoted to the non-ionizing side of the electromagnetic spectrum. Its June issue, however, features five papers, all of which claim to show that EMFs of one type or another have no biological effects. . . .

They are on a mission, they say, to allay "widespread concern" over power lines and cell phones by giving a voice to those who, despite great effort, could not substantiate previously reported findings of "deleterious health effects."

The editorial tacitly concedes that Radiation Research only rarely publishes papers showing any type of EMF effects by failing to cite a single example from its own pages. At the same time, it fails to mention that other journals, for instance Mutation Research and Bioelectromagnetics, have had no trouble finding high-quality papers with "positive" results —that is, those that do show biological effects.

. . . Another important fact goes undisclosed in the editorial: One of its authors, John Moulder, a professor at the Medical College of Wisconsin in Milwaukee, has a lucrative consulting practice on EMFs and health. Over the years, Moulder has earned hundreds of thousands of dollars disputing the existence of adverse EMF health effects, even those accepted by most other members of the EMF community.

To explore the potential biases at work, Microwave News investigated a subset of health studies published in peer-reviewed scientific journals. We selected papers on microwave-induced genotoxicity; that is, microwave effects on DNA, the genetic blueprint inside every living cell. With the generous help of Henry Lai of the University of Washington, Seattle, we identified 85 radiofrequency (RF)/microwave-genotox papers published since 1990. Of these, 43 found some type of biological effect and 42 did not. (You can download a complete list of references and abstracts.)

Lai is an interested party to this controversy. Together with N.P. Singh, Lai made RF/microwave genotoxicity a major concern when, in the mid-1990's, they were the first to report that microwaves could lead to DNA single- and double-strand breaks. As you can see in Table 1, Lai is the lead author of four of the 43 "effect" or positive studies. . . .

There is just about an even split between effect and no-effect papers. But look what happens when we superimpose the funding source for each study (where available): Those sponsored by industry are in red and those sponsored by the U.S. Air Force are in purple in Table 2. (Papers with no declared funding source are in green.)

A clear —and disconcerting— pattern emerges: 32 of the 35 studies that were paid for by the mobile phone industry and the U.S. Air Force show no effect. They make up more than 75% of all the negative studies. You don't need to be a statistician to infer that money, more often than not, secures the desired scientific result. . . .

### **John Moulder: Industry Consultant**

We suspect that much of Radiation Research's bias against EMF effects can be attributed to John Moulder, who came on as an editor in 1991 and was promoted to senior editor in 2000. For this whole time —during which the microwave–genotox controversy became more and more contentious— Moulder has been a consultant to the power, electronics and communications industries, as well as for anyone, it seems, who disputes the existence of EMF-induced adverse health effects. For years he posted his skeptical views on the health impacts of cell phones, base stations and power lines on his Web site, and these serve as lures for potential like-minded clients.

Last year, for example, Moulder testified against the family of Richard Beissinger, a professor at the Illinois Institute of Technology (IIT) in Chicago who died of a brain tumor in 2003. His widow and five children were seeking worker's compensation for what they believed was an EMF-induced cancer. Beissinger taught and worked in rooms near electrical transformers. His magnetic field exposures are uncertain, but very high, ranging from 10 mG (1  $\mu$ T) to 820 mG, and at times probably more than 1 G.

At a hearing held in 2005, Moulder stated under oath that, in his opinion, "power-frequency magnetic fields do not cause any kind of brain cancer under any exposure, intensity and duration" [our emphasis].

Moulder was no doubt aware that the California EMF program had previously concluded that magnetic fields are a likely cause of adult brain cancer. And that many years earlier, a team coordinated by the Electric Power Research Institute (EPRI) had reported that, taken together, epidemiological studies of workers exposed to magnetic fields pointed to a statistically significant elevated risk of brain cancer.

While electric utility industry operatives may have conceded that there may well be a link between long-term exposure to magnetic fields and brain cancer, that did not deter Moulder. He made \$10,000-\$12,000 trying to deprive the Beissinger family of a small pension. On May 23, at about the same time that the "negative effects" editorial appeared in Radiation

Research, an arbitrator rejected Moulder's argument and ruled in favor of Beissinger's family. The decision is under appeal.

In the course of his testimony, Moulder acknowledged that he had earned approximately \$300,000 in litigation-related fees, on power-frequency EMFs. This probably represents a fraction of Moulder's earnings, since litigation services represents only one part of his consulting practice. For instance, in 2001 Moulder testified at a hearing on behalf of the Minnesota Power Co. and Wisconsin Public Service Corp., which had applied to build a new transmission line. In that testimony, Moulder revealed that he would be paid about \$35,000 for this case alone.

Nor is Moulder's consulting limited to power-frequency EMFs. In 1999, he prepared a report for the U.K. Federation of Electronic Industry (now called Intellect), which was submitted to the Independent Expert Group on Mobile Phones, better known as the Stewart panel. And the following year he wrote a report for the Australian Mobile Telecommunications Association, which was submitted to the Australian Senate. He has not disclosed how much money he was paid for these opinions, but in March 2001, Moulder told an Australian senate committee that, on average, 8-10% of his income was from the telecommunications industry alone.

### **Those Reporting Positive Results Attacked**

Back in 2001 after Moulder had moved up to senior editor, he recruited Vijayalaxmi of the University of Texas in San Antonio to join the Radiation Research editorial board. A couple of years earlier they, together with some colleagues from Washington University and the U.S. Air Force, had published a review paper that dismissed any possible connection between cell phones and cancer. This too was published in Radiation Research.

As shown in Table 2, Vijayalaxmi is the lead author on seven of the microwave-genotox papers. All were funded by the U.S. Air Force, Motorola or a combination of the two.

. . . Radiation Research has become a repository for negative papers and thus an important part of the industry and military strategy to neutralize those who dare to challenge the no-effects dogma. Their work had been made much easier with John Moulder on the inside to ease industry papers into print.

## **The official scientific argument for ‘no proven EMR bioeffects’**

In the 2000 book *Voodoo Science* by Robert Park, the American Physical Society, (APS) public spokesman and physics professor, Park defended his long held viewpoint that EMR only has effects from heating and any claimed bioeffects have not be proven, therefore EMR is not a health risk. It would seem difficult to refute a top scientist such as Park. For the most part, mainstream press does not challenge his position.

Park’s book presented his questionable scientific arguments against any possible bioeffects of EMR except from heating. This is important to understand because Park was also one of the top experts, including six Nobel laureates who signed an amicus brief around 1996 which said there was no EMF-cancer link. On page 168, Park wrote, "The Covalt decision (California Supreme Court ruled against the Covalts) effectively ended EMF litigation in California and dampened the enthusiasm for such cases nationwide."

It is no coincidence that Park is repeating the very entrenched position on EMR bioeffects; that there are only proven heating effects from EMR and any other bioeffects have not been proven. At the least, this does not excuse the omission of new scientific studies or the equally valid alternative position in Park's analysis and conclusion. For example, Dr. Adey was an outspoken advocate. At a 1987 congressional hearing he testified about the lack of research on nonthermal bioeffects. Dr. Adey put the blame on military and corporate interests. As reported in [Microwave News](http://www.microwavenews.com/may_04.html#may20), May, 2004, [http://www.microwavenews.com/may\\_04.html#may20](http://www.microwavenews.com/may_04.html#may20);

Ross Adey died on May 20th at the age of 82 after a long battle against a series of bronchial infections. Adey, a medical doctor, was a towering figure in the EMF community, who was equally at ease talking about the most recent papers in the biological and medical literature or dissecting the arcane engineering details of an experimental setup. He is perhaps best known for discovering, with Suzanne Baldwin, the first non-thermal effect of electromagnetic radiation during the 1970s: They showed how ELF-modulated RF signals can lead to the release of calcium ions from cells.

Many other top scientists publicly defend the EMR bioeffects official position and this is a clear example of how powerful and organized the government's bully scientific pulpit is and also the national security weaponeers culture. For example, David Jones, producer of 1984 BBC documentary, *Opening Pandora's Box*, asked Dr. Koslov, director of Project Pandora; "In terms of science there seems to be two possibilities, one is that behavior and health are affected by EMR and the second is the creation of a new genre of weapons and that its conceivable that it is a totally black area of research. Dr. Koslov replied that back in 1965, there was alot of conjecture and hypothesis about that. That's why it led to Project Pandora. Since then, I don't think there is very much possibility, that there is, at this point in time, there doesn't seem to be.

Dr. Sam Koslov, . . . continued, "[We] thought about it, don't get me wrong, . . . but nothing was found, it doesn't look like [there is]...militarily at this time, there is no EMR weapons potential. There is nothing to the biological effects claim. There is an amount of power problem." David Jones asked Dr. Koslov why he thought that the Soviets were microwaving the Embassy. Dr. Koslov replied that "I would rather not discuss it [because] it would get into security areas." Park and most top scientists fail to mention the fact that there is a long history of very classified EMR bioeffects research.

First, Park argued the widely repeated official stance that the only known scientific mechanism for how EMR works biologically is by heating only. Park actually supplied the physics explanation for heating effects of EMR in his book as if this was enough to dispel the empirical evidence of EMR bioeffects. Only heating effects of EMR have been proven, according to Park as he explained on page 144; "The biological effects of microwaves had been studied for thirty years and were the subject of hundreds of papers in the open literature. . . . the same facts that had reassured Ellie Adair [Yale University physics professor]", i.e. that microwaves are harmless.

Secondly, Park explained that microwaves don't cause DNA breaks so microwaves could not be a cause of cancer. On page 149, Park explained that Bob Adair published his work in the Physical Review. "He relied on well-established principles to show that there was no known mechanism that could account for reports of health effects from low levels of microwave radiation." Park is arguing that any possible unknown mechanisms to account for health effects of EMF just don't count or are voodoo science.

But as reported in the 2006 Microwave News Radiation Research article, Henry Lai of the University of Washington, Seattle, scientific studies do show DNA breaks from exposure to EMR. "Together with N.P. Singh, Lai made RF/microwave genotoxicity a major concern when, in the mid-1990's, they were the first to report that microwaves could lead to DNA single- and double-strand breaks." Park ignored this evidence and explained his theory of why EMR can't cause DNA breaks on page 147-8;

The effect of all known cancer-inducing agents-ionizing radiation such as ultraviolet or Xrays, chemical carcinogens such as tobacco smoke, and certain viruses- is to damage DNA. The damage consists of broken or altered chemical bonds, creating a mutant strand of DNA. Microwave photons can cause chemical bonds to stretch and bend but cannot come even close to severing the bonds. One of the great triumphs of quantum mechanics was the discovery that electromagnetic radiation interacts with matter only in discrete bundles of energy called photons. The energy of a photon is expressed mathematically as the product of a universal constant, called the Planck constant, multiplied by the frequency. Photons that have enough energy to break chemical bonds are called ionizing radiation. Whether electromagnetic is ionizing is independent of the intensity, or number, of photons; it depends only on the energy of the individual photons. ...The lowest energy photons capable of directly breaking

chemical bonds are in the near-ultraviolet region of the spectrum, just beyond the region of visible light. These photons are about a million times more energetic than the microwave photons . .

### **EMR weaponeers scientific culture**

Welsome, who wrote *Plutonium Files* provided a description of the systematic methods employed by the atomic bomb weaponeers. Her description can be applied to the science culture surrounding EMR research as follows. The EMR research and weaponeers scientific culture is an old boys network of top scientists, experts and advisors and military officials who control the EMR information, propaganda and EMR research. They believe the ends justify the means in the case of protecting national security by developing powerful new EMR weapons comparable to the atomic bomb. Park, the APS spokesman and Garwin, the top JASON physicist continue to publicly push the EMR heating effects only argument in spite of ample scientific evidence to the contrary. This public bully pulpit has been extremely effective in promoting the propaganda of no EMR health effects, rather than a balanced debate. Mike Repacholi, head of the World Health Organization's EMF Project broke the standard rules of conflict of interest and sat on power line industry boards at the same time.

The government and military boards of advisors on EMR standards and health effects have waged an aggressive propaganda campaign about the “no EMR health effects” government policy and the suppression of all potentially negative stories about health hazards related to EMR. Slesin described numerous examples above.

Government officials routinely suppress information about possible EMR health effects. The fact is, EMR experts have controlled virtually all the information on EMR bioeffects in the name of national security. Slesin explained how the USAF clearly supports 'no effects' (no EMR bioeffects are found) research over 'effects' (EMR bioeffects results are reported) research.

They sat on the boards that set EMR health standards, consulted at meetings, and served as expert witnesses in EMR cases. Park was also one of the world class experts, including 6 Nobel laureates who signed an amicus brief around 1996 which said there was no EMF-cancer link. On page 168, Park wrote, "The Covalt decision (California Supreme Court ruled against the Covalts) effectively ended EMF litigation in California and dampened the enthusiasm for such cases nationwide. " Park's book presented the basic arguments against any possible bioeffects of EMR except from heating and is therefore important to understand. Possible health effects from EMR have been denied and suppressed.

Lies and half truths by top EMR scientists are common place, in order to avoid lawsuits and to perpetuate the hard line scientific policy and government cover story of only heating effects from EMR. John Moulder routinely testifies in court for huge consulting fees. Slesin explained that "Moulder has been a consultant to the power, electronics and communications industries, as well as for anyone, it seems, who disputes the existence of

EMF-induced adverse health effects. For years he posted his skeptical views on the health impacts of cell phones, base stations and power lines on his Web site, and these serve as lures for potential like-minded clients." Slesin's article, *Cult of Negative Results* described Moulder's recent and very lucrative courtroom and industry consulting work.

Withholding and distorting facts and scientific evidence about EMR in the name of national security is commonplace among top EMR scientific officials. In his 1990 book, *Crosscurrents, The Perils of Electropollution*, Dr. Robert Becker explained how and why the U.S. government suppressed and controlled nonthermal bioeffects research beginning with the development of radar in the 1940s;

The military organism was designed on the 10 mW standard and, once in place, it had to be defended against the possibility of nonthermal bioeffects. The recognition and validation of these effects would mean the collapse of the total organism and the death of C3I,(for command, control, communications, and intelligence). . . . evidence for nonthermal effects was viewed as a threat to national security.

Control over the scientific establishment was maintained by allocating research funds in such a way as to ensure that only 'approved' projects -- that is projects that would not challenge the thermal-effect standard -- would be undertaken. . . . In some instances, scientists were told that nonthermal effects did occur, but that national security objectives required that they be exceptionally well established before they became public knowledge.

All of these reports shared certain characteristics. Scientific data indicating nonthermal bioeffects were either ignored or subjected to extensive and destructive review. . . . while a statement such as 'There is no evidence for any effects of pulsed magnetic fields on humans' would have been literally true, it would have ignored the many reports of such effects on laboratory animals and the fact that no actual tests had been conducted on humans.

Scientists who persisted in publicly raising the issue of harmful effects from any portion of the electromagnetic spectrum were discredited, and their research grants were taken away. Deployment of powerful and exotic electromagnetic systems continues, with little, if any, consideration given to the potential impact of these systems on the health and safety of the public.

A more current but similar example of withholding and distorting facts and scientific evidence about EMR in the name of national security by top EMR scientific officials was described above in Slesin's article *the Frontline Story*. The article recounted a Department

of Defense JASON report that was not clearly explained in the misleading conclusion of the APS statement.

In conclusion, this is the more balanced but rarely heard argument on the EMR bioeffects controversy. Thanks to Welsome's description of a Cold War science culture and the handful of distinguished critics like Arkin, Becker, Brodeur, Adey, Steneck, Slesin and a few others who spoke out, the mechanics of how the U.S. government carried out the nonthermal bioeffects cover story, suppressed court cases and influenced, even controlled public policy on health effects of EMR for questionable national security goals can now be clearly understood. In particular, the scientific bias of the cell phone and power line industry and the U.S. government can be documented, understood and challenged.

### **Section 15 An unanticipated finding: a reasonable probability of advanced mind control weapons developed by the U.S.**

Moreno stated that the main ideas of the atomic bomb could be figured out by physicists even though it was classified. On page 25-26 he wrote;

The process for manufacture of the atomic bomb is the classic example of science conducted in secret: the most important and highly classified scientific secret in history stayed secret only about four years, until the Soviets exploded their own device in 1949. For all the imagined and actual espionage activity around the bomb, competent physicists only had to study the published literature to get the main ideas.

As became clear in this paper, the main ideas of EMR mind control weapons can also be deduced. Major countries for years have had highly classified EMR weapons programs and are including them prominently in their future military doctrines. Moreno did not see that a very common tactical scientific ploy to control information is to say there is no theory when the theory or information is almost surely classified.

Much can reasonably be deduced from the history of EMR weapons development. By reviewing the fifty years of EMR mind control weapons history in the post Cold War period, a convergence of CIA mind control research, military mind reading research and the East/West EMR weapons development and controversy; all together, formed a mosaic.

This mosaic from several independent sources of unrelated information revealed an unanticipated and far-reaching finding: the reasonable probability that the U.S. has successfully developed advanced mind control weapons. And EMR weapons are known to have been in development in the U.S. since the 1960s and by major nations of the world since at least the 1990s, probably earlier. New, although very weak, evidence on human surveillance research developed during the Cold War and as one of the deepest secrets of the nation. This may start to explain the remote targeting that most alleged mind control victims report.

It can be argued that Moreno's outlook of the likelihood of a world without government EMR mind control weapons after the breakup of the Soviet Union is unrealistic. The following four paragraphs that briefly describe an alternative viewpoint. In 2005, a Scientific American article discussed the issue of mind control and the famous neuroscientist Jose Delgado and his controversial 1950s-1990s brain implant and EMR research. The article cited Mind Justice as a resource for information on the issue and the following fifty year EMR weapons development history from the Mind Justice website would seem to be a reasonable possibility.

This is a brief overview of the more extensive documentation on the Mind Justice website. Three seemingly separate fields of research connect in a post cold war examination: the almost fifty years of very classified electromagnetic radiation (EMR) weapons research, the almost fifty years of very classified CIA mind control research and over thirty years of very classified military brain research. By combining the three fields of research, a new perspective emerges: a reasonable probability that EMR could be used for mind control purposes on people at a distance. The connecting link are two theories for EMR weapons.

Moreno does not discuss that several human rights experts, military and civilian authorities, and top government science advisors claim that the bioeffects of EMR are a scientific basis for some EMR weapons and a biological basis of some brain function. The second scientific theory for EMR weapons was based on the development and technology of electromagnetic brain signals and the organization of the central nervous system. The mind and nervous system communicate with electrical, magnetic and EMR signals. Signals from outside sources can mimic, block, or alter the mind and body's own signals. The two theories were established decades ago, are known to be very classified, and the theories have not been disproven for almost fifty years.

Remote mind control could now be a classified and potent military capability. The first field of research to connect is the almost fifty years of US/Russian scientific controversy over bioeffects of EMR and the strictly classified research of EMR weapons. The second field of research to connect is the 1960s CIA "supersecret behavioral-control project," described as a "program [that] was a full-scale one and just as secret as the earlier MK-ULTRA project." The third field of research to connect is the classified mind reading research funded by the military for over thirty years. The 1976 *Los Angeles Times* reported that mind reading was possible and funded by the government in million-dollar-a-year programs. According to another government scientist in the article, reading brain signals remotely "a few to several feet from the head" was feasible in the mid-1970s.

In addition, the three connected fields of research are large, well-funded, very classified for decades, and based on the same scientific theories used for EMR and mind control weapons. And further, for almost fifty years, national security policy has completely dominated US scientific research of EMR, and also mind reading and mind control weapons. As a result, the science and theories of EMR biological effects or mind reading

and mind control are not available in the open literature and probably never will be. Together, this evidence suggests a reasonable probability of advanced mind control weapons developed by the U.S.

### **Section 16 No human subject protections in classified experiments: a case of the highest levels of government acting above the law and paying lip service**

Moreno discounted the impact of U.S. government illegal conduct surrounding past mind control human experiments and current EMR weapons programs. Across the board, Moreno minimizes the past effects of cold war national security, for example in unethical or illegal radiation experiments conducted as a result of the development of the atomic bomb. Moreno notes the significant changes in secrecy since 9-11 but doesn't analogize to possible current illegal experiments or another Manhattan project to develop mind control weapons. Moreno wrote that human subjects protections for national security experiments are still far from adequate.

Moreno was a member on the Advisory Committee on Human Radiation Experiments (ACHRE) and their *Final Report*, concluded that "with respect to classified research, the current requirement of informed consent is not absolute; if consent is waived, the research may proceed in ways that do not adequately protect the research subject." He is aware that the problem was significant. A 1994 congressional hearing report that "nearly half a million Americans were subjected to some kind of cold war era tests," often without being informed and without their consent.

A 1997 Clinton presidential *Memorandum on Protections for Human Subjects of Classified Research* was addressed to government agencies under the current federal regulations for human experiments, but the memorandum was only adopted by the Department of Defense. The Department of Health and Human Services (HHS) has not adopted the new regulations, and the CIA in turn has not adopted the regulations, since intelligence agencies follow HHS regulations on human experiments, as directed by Executive Order, (EO) 12,333.

EO 12,333 cites and follows the Code of Federal Regulations (CFR), Title 45 CFR Part 46, which are the current rules for protections of human subjects in both classified and unclassified experiments. In 1991, fifteen federal agencies codified the regulations and the CIA updated the regulations to the current executive order on experimentation. EO 12,333 still includes;

Section 2.10 Human Experimentation. No agency within the Intelligence Community shall sponsor, contract for or conduct research on human subjects except in accordance with guidelines issued by the Department of Health and Human Services. The subject's informed consent shall be documented as required by those guidelines.

Informed consent of the research participants, institutional review board approval of research conditions and other human subject protections have been a part of the federal rules since 1974. Significantly, the current regulations include CFR Part 46 section 46.101(i). This section allows for a waiver of any or all of the CFR regulations and for a statute or executive order to override the notification and publication requirements. Section 46.101(i) states: “Unless otherwise required by law, Department or Agency heads may waive the applicability of some or all of the provisions of this policy . . .”

This waiver of any of the federal regulations provisions effectively nullifies the regulations, allowing for a total lack of protections for human subjects of classified research at the discretion of Department or Agency heads and under total secrecy. Without legal protections, illegal, unethical classified experiments could happen again.

On page 168, Moreno writes “In representative democracies, both legislative oversight bodies and independent watchdog organizations play a significant role in keeping responsible parties accountable.” But in past US national security experiments, this was for the most part not true. A 1963 CIA inspector general’s report on MKULTRA, the CIA’s mind control program, acknowledged the illegalities. “Some [of these] activities raise questions of legality implicit in the original charter. [The charter is congressionally approved]. . . . A final phase [of some of these projects] places the rights and interests of US citizens in jeopardy.” Law professor Alan Schefflin examined thousands of declassified CIA documents and concluded, “There are dozens of CIA memos that attest to the illegal and unethical nature of its work. . . . It is difficult not to conclude that the CIA is above the law and unhampered by Congress, the American public or the occupant of the Oval Office of the White House. “

And more to the point, the illegalities and unaccountability of intelligence agencies is continuing today. In a September, 21, 2005, Washington Post article *Commandos in the Streets?*, William Arkin described extreme secrecy surrounding secret weapons and possible illegal acts. This increases the likelihood that illegal experiments could also be occurring.

Further, Granite Shadow posits domestic military operations, including intelligence collection and surveillance, unique rules of engagement regarding the use of lethal force, the use of experimental non-lethal weapons, and federal and military control of incident locations that are highly controversial and might border on the illegal. Both plans seem to live behind a veil of extraordinary secrecy because military forces operating under them have already been given a series of "special authorities" by the President and the secretary of defense. These special authorities include, presumably, military roles in civilian law enforcement and abrogation of State's powers in a declared or perceived emergency.

Here is one more example. A September 29, 2005, New York Times article by Douglas Jehl, *Republicans See Signs That Pentagon Is Evading Oversight*, reported a lack of legislative and executive oversight and accountability for secret weapons programs:

Republican members of Congress say there are signs that the Defense Department may be carrying out new intelligence activities through programs intended to escape oversight from Congress and the new director of national intelligence. . . . The lawmakers said they believed that some intelligence activities, involving possible propaganda efforts and highly technological initiatives, might be masked as so-called special access programs, the details of which are highly classified. The report said the committee believed that "individual services may have intelligence or intelligence-related programs such as science and technology projects or information operations programs related to defense intelligence that are embedded in other service budget line items, precluding sufficient visibility for program oversight." "Information operations" is a military term used to describe activities including electronic warfare, psychological operations and counterpropaganda initiatives.

In his 1999 book, *Undue Risk: Secret State Experiments on Humans*, Moreno warned of today's new weapons and the inevitability of unethical classified government experiments. On page 289;

In the next century, as in the past, military medical research involving human subjects will be dictated by the limits of information available from other sources. Because a new generation of weapons is being developed that are intended to incapacitate rather than kill an enemy, computer simulations and animal models can only go so far. Among the next generation of weapons is one that may involve a different sort of radiation than that emitted by atomic fission: microwaves. Electromagnetic waves may be used to disrupt an enemy soldier's central nervous system, to cause epileptic seizures.

### **Section 17 National security: utilitarian judgments at the highest levels of U.S. government**

Past mind control experiments were based upon utilitarian judgments made at the highest levels of government according to testimony by Columbia University Professor John Rothman at the 1994 Congressional hearing, *Cold War Era Human Subject Experimentation Hearing Before the Legislation and National Security Subcommittee of the Committee On Government Operations House of Representatives*. The testimony of Rothman, explained how a very calculated government policy incorporates the unspoken but widespread belief of the need for illegal human experiments as essential to national security. This policy is well-funded with defense dollars and government action; thereby

easily overpowering the consensus of professional communities, now including Moreno and the neuroscience society, who offer rhetoric but seem unable to carry out serious actions for protecting human subjects;

If the ethics of experimentation were so clearly established, why did American investigators so frequently violate them? Well, I think the essence of the answer is the war effort, first in 1940 to 1945, then the cold war effort after 1945, fostered what we might call highly utilitarian judgments. Investigators made the calculus that the national interest outweighed individual rights, that the exigencies of the cold war justified violations of known ethical practices. . . . I was most impressed this morning with the questioning that went on about the chain of command. Who was it that allowed or finally passed off on the experiment? How did it work its way through? Was it simply, well that is a fine idea, let's go out and do it? Was there anything approximate meriting chain of command? Was there anything approximating signoff? . . . And if we are going to set up various kinds of corrective measures, I think that knowledge is absolutely essential.

The highest levels of government were involved in past illegal mind control experiments. The Cold War national security values were held by professionals in the 1950s and there are indications the values are continuing today. National security utilitarian judgments were and are instrumental in overshadowing the ethics of human subject protections. For example, an August, 7, 1996 Journal of the American Medical Association (JAMA) reported the reaction of the medical community to the 1995 ACHRE (Advisory Committee for Human Radiation Experiments) report with calls for more voluntary reforms and weak sanctions;

Today, consensus exists that duties to obtain informed consent apply to all human subjects, whether healthy or sick, regardless of the risk or potential for medical benefit from participation in the research and regardless of the nature of sponsorship or funding (e.g. federal, military, or private). Based on a finding of serious deficiencies in the current system of protections for human subjects, recommendations include accountability and sanctions for ethics violations.

Ten years after the JAMA article, no laws are in place to implement the consensus for a duty to obtain informed consent in human experiments. The core concern raised in this paper is that the very powerful and silent Cold War culture described by Welsome easily thwarts human subject protections advocates. The widely-held belief that secret experiments couldn't happen again does not take into account the paradox that this majority fails to act on their very vocal consensus for informed consent in experiments.

Clearly, classified, unlawful government experiments are undemocratic, unethical and violate fundamental human rights. Rothman's suggestions have not been implemented. The current ineffective experimentation regulations support that utilitarian decision-making at the highest levels of government is continuing today.

The ethics and rules which Moreno advocated are not enough to prevent future experiments. Legislation with penalties is called for but there is no political will for legislation, even after scandals have occurred. Few are confronting or exposing the overwhelming utilitarian national security consensus and legal inequities. It seems that Moreno can only offer guidelines to prevent future abuses. This important but seldom publicized information is necessary for a balanced debate.

### **Section 18 Treaties, laws and proposed legislation on EMR weapons**

U.S., Russian and international discussions, proposals, legislation and international treaties for EMR mind control weapons are crippled by secrecy. The concerns about possible misuse and abuse regarding the development and control of EMR mind control weapons is a slowly growing international issue, as seen in a few of the available government documents. The weapons are classified and this limits the discussions and possible legislation, but the following recent US, Russian, and European documents are significant.

Congressman Dennis Kucinich sponsored House Bill 2977, *The Space Preservation Act of 2001*. This bill for banning weapons in space, included “psychotronic” and “mind control” weapons. According to Kucinich’s office, amidst pressure and concerns about ensuring bill passage, the section relating to “mind control” was removed from the bill in Spring 2002, but the bill still failed to pass. The relevant excerpt stated;

(2)(A) The terms ‘weapon’ and ‘weapons system’ mean a device capable of any of the following: . . .(ii) Inflicting death or injury on, or damaging or destroying, a person (or the biological life, bodily health, mental health, or physical and economic well-being of a person)- . . . (II) through the use of land-based, sea-based, or space-based systems using radiation, electromagnetic, psychotronic, sonic, laser, or other energies directed at individual persons or targeted populations for the purpose of information war, mood management, or mind control of such persons or populations; . . .

A 1998 Russian federal law, *About Weapons*, is cited in the edition of Federal Laws of the Russian Federation. This Russian law is in effect today and prohibits;

“the circulation of civilian and military weapons” including the “use of radio-active radiations and biological factors;-weapons and other objects, the affects of the operations of which are based on the use of electro-magnetic, light, thermal, infra-sonic or ultra-sonic radiations and which have [existing] parameters, exceeding the magnitude of established governmental standards of the Russian Federation and corresponding norms of Federal governmental organs in the area of the Health Department,”

A 1998 report edited by Morton Sklar of the World Organization Against Torture USA is entitled *Torture in the United States: The Status of Compliance by the US Government with the International Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*. The report was “prepared by the Coalition Against Torture and Racial Discrimination, a Joint Working Group of Non-Governmental Civil and Human Rights Groups in the US.” This project to “issue a joint report on US compliance under the Convention Against Torture was made possible through grants provided by the Ford Foundation and the World Council of Churches.” The chapter on involuntary human scientific experimentation concludes with the following;

Similar concerns also are being raised about involuntary human experimentation involving new forms of classified research and testing of high technology military weaponry, including microwave and laser equipment. Groups working on these issues cite, among other evidence of the existence of these unauthorized testing procedures, a White house inter-governmental memorandum dated March 27,1997, establishing stronger guidelines prohibiting non-consensual testing for classified research, but suggesting, by implication, that this type of human subject research may, in fact, be taking place. Because of the classified nature of these activities, it is very difficult to confirm or disprove that they are taking place. Given the serious negative impacts on non-consensual human subjects that classified research of this type is capable of producing, and given the past history of secret experimentation by the government, these allegations of continuing improprieties involving secret government sponsored human testing should not be dismissed without more thorough, impartial investigation.

The European Parliament Resolution A4-005/99 entitled “Resolution on the Environment, Security, and Foreign Policy” passed on January 29, 1999. The draft resolution specifically discussed the serious concerns regarding EMR weapons. The final resolution “calls for an international convention introducing a global ban on all developments and deployments of weapons which might enable any form of manipulation of human beings.”

Michigan is the only state to pass a criminal statute for EMR devices. The 2004 Michigan law states "A person shall not manufacture, deliver, possess, transport, place, use, or release any of the following for an unlawful purpose: . . . (d) A harmful electronic or electromagnetic device," defined as;

"a device designed to emit or radiate or that, as a result of its design, emits or radiates an electronic or electromagnetic pulse, current, beam, signal, or microwave that is intended to cause harm to others or cause damage to, destroy or disrupt any electronic or telecommunications system or device, including, but not limited to, a computer, computer network or computer system."

The bill includes the following violation and punishment; "If the violation directly or indirectly results in personal injury to another individual other than serious impairment of

a body function or death, the person is guilty of a felony punishable by imprisonment for not more than 25 years or a fine of not more than \$20,000.00., or both.

The excessive secrecy surrounding nonlethal weapons prevents evaluation of the new weapons by human rights groups. In the Reuters World Service, May 30, 1996, *Microwave and Acoustic Weapons Pose New Threats*, Jim Della-Giacoma reported;

" . . . There are indications that [electromagnetic weapons] may have adverse affects on the brain," she [Louise] Doswald-Beck, [Deputy Head of the legal division of the Geneva-based ICRC(International Committee for the Red Cross)] said. . . . Doswald-Beck said . . . all developed countries were doing research on microwave and acoustic weapons. "The U.S. makes a lot of mention of it in its specialised literature but then they say it's classified. The same goes with some European countries. The West assumes that Russia's doing it, but it is kept under wraps," she said. Doswald-Beck said the ICRC was unable to do the early research on banning microwave and acoustic weapons because they were shrouded in secrecy.

The Bulletin of Atomic Scientist, September/October 1994 discussed unsuccessful efforts to ratify protocols for EMR weapons under the Certain Conventional Weapons Convention (CWC, also known as the Inhumane Weapons Convention). The CWC is the general treaty which covers EMR weapons today. Full article posted here; [http://www.thebulletin.org/article.php?art\\_ofn=so94aftergood](http://www.thebulletin.org/article.php?art_ofn=so94aftergood)

*Sidebar: "Non-lethal" weapons may violate treaties*

Development of many of the proposed weapons described on these pages has been undertaken by NATO, the United States, and probably other nations as well. Most of the weapons could be considered "pre-lethal" rather than non-lethal. They would actually provide a continuum of effects ranging from mild to lethal, with varying degrees of controllability. Serious questions arise about the legality of these expensive and highly classified development programs. Four international treaties are particularly relevant

. . . The Certain Conventional Weapons Convention (also known as the Inhumane Weapons Convention). [2] Many of the non-lethal weapons under consideration utilize infrasound or electromagnetic energy (including lasers, microwave or radio-frequency radiation, or visible light pulsed at brain-wave frequency) for their effects. These weapons are said to cause temporary or permanent blinding, interference with mental processes, modification of behavior and emotional response, seizures, severe pain, dizziness, nausea and diarrhea, or disruption of internal organ functions in various other ways. In addition, the use of high-power

microwaves to melt down electronic systems would incidentally cook every person in the vicinity.

Typically, the biological effects of these weapons depend on a number of variables that, theoretically, could be tuned to control the severity of the effects. However, the precision of control is questionable. The use of such weapons for law enforcement might constitute severe bodily punishment without due process.

In warfare, the use of these weapons in a non-lethal mode would be analogous to the use of riot control agents in the Vietnam War, a practice now outlawed by the CWC. Regardless of the level of injury inflicted, the use of many non-lethal weapons is likely to violate international humanitarian law on the basis of superfluous suffering and/or indiscriminate effects. [3] In addition, under the Certain Conventional Weapons Convention, international discussions are now under way that may lead to the development of specific new protocols covering electromagnetic weapons; a report is expected sometime next year. The current surge of interest in electromagnetic and similar technologies makes the adoption of a protocol explicitly outlawing the use of these dehumanizing weapons an urgent matter.

--Barbara Hatch Rosenberg

...

2. The full name of this treaty is "Convention on Prohibition or Restriction of the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects."

3. Louise Doswald-Beck, ed., *Blinding Weapons: Reports of the Meetings of Experts Convened by the International Committee of the Red Cross on Battlefield Laser Weapons, 1989-1991* (Geneva: Internal Committee of the Red Cross, 1993).

The classified EMR weapons are seriously lacking in any evaluation by human rights groups for international treaty compliance and lack any public input or scrutiny. The seriousness of the issue of EMR mind control weapons becomes apparent with the comparison to the atomic bomb. The atomic bomb was public information almost from the start. Nuclear protesters and the general public could express their views on the atomic bomb, international arms control treaties are in place. EMR mind control weapons have been heavily classified for over forty years and never publicly used, while being described as powerful as the atomic bomb by many experts. Classified EMR weapons are beyond the democratic system of oversight, accountability and checks and balances.

## **Section 19 Lessons not learned, *Dr. Strangelove, Or: How I Learned To Stop Worrying And Love The Bomb***

Moreno wrote that there were no Russian doomsday weapons, another indication that EMR mind control is probably just disinformation. Here is an excerpt about the fears of a Russian doomsday weapon from the 1964 movie *Dr. Strangelove, Or: or how I learned to stop worrying and love the bomb*. “The movie was producer/director Stanley Kubrick's brilliant, satirical, provocative black comedy/fantasy regarding doomsday and Cold War politics that features an accidental, inadvertent, pre-emptive nuclear attack.” The Cold War fears are similar to the fears present in the post 9-11 years. Posted at <http://www.filmsite.org/drst.html>

The narrator (in voice-over) drones ominously, with factual directness, about a top-secret Doomsday Machine being constructed in the Arctic that could reduce the world to nothingness:

For more than a year, ominous rumors have been privately circulating among high-level western leaders that the Soviet Union had been at work on what was darkly hinted to be the Ultimate Weapon, a Doomsday device. Intelligence sources traced the site of the top secret Russian project to the perpetually fog-shrouded wasteland below the arctic peaks of the Zhokhov Islands. What they were building, or why it should be located in such a remote and desolate place, no one could say.

Unlike the Doomsday device, the science, theories and technology for EMR mind control weapons have been feasible for over fifty years and the U.S. government is on the record for suppressing, controlling and at the same time funding EMR nonthermal bioeffects research and very classified EMR weapons development since the beginning of the Cold War. The long-term demonstrated importance of EMR mind control weapons to national security indicates a Cold War/post Cold War mind control EMR arms race. International laws and treaties provide evidence of the public's need for protection from the illegal uses of EMR mind control weapons.

Moreno made the very common mistake of not looking beyond the testimonies of alleged mind control victims. Mainstream press and now Moreno and the neuroscience community have dismissed the claims as conspiracy theories without a thorough and impartial investigation. Moreno's did not present the required balanced debate needed to reach such an unequivocal conclusion. The public is left to ponder a complex and controversial issue with little hard evidence. Moreno's professional beliefs and opinions lack sufficient supporting evidence. The fallacies and bias in Moreno's reasoning are too serious to disregard.

For now, unfortunately, the victim's position provides a weak circumstantial case. The pattern of claims of the same cluster of symptoms by the growing number of victims worldwide since the 1960s would seem to be an indication of how advanced government

mind control weapons are. The US Air Force doctrine on *Controlled Personnel Effects* for new weapons as early as 2020 sounded like science fiction but is being carried out. *Controlled Personnel Effects* matches the growing victim's claims of remote satellite targeting any place in the world. Clearly, hard evidence is needed, such as tracing the highly advanced EMR signals allegedly used, to the government.

National security human experimentation law has remained the same in large part because national security interests are a powerful force in preventing Congress from passing laws on human subjects of experimentation for national security and also on the president, whose executive orders determine the rules for national security experimentation.

Everyone can agree national security is vital but excessive secrecy that allows MKULTRA mind control experiments, radiation experiments and now allegations of illegal government mind control experiments without further investigation is especially appalling. Government oversight and accountability of new weapons development are additional serious ongoing problems.

### **What can be done now**

Because reliable documented information on brain research and national security for the public is lacking, requests for a GAO or Government Accounting Office report on the new technologies and weapons should be made. A citizen or group may have success if they request a report from the more prominent members of Congress on topics such as;

1. Classified neuroscience research, the history, regulation, government oversight mechanisms and future implications.
2. Nonlethal, information and EMR weapons, the history, regulation, government oversight mechanisms and future implications.
3. Remote human surveillance, the history, regulation and government oversight mechanisms and future implications.

Given the reported abuses and calls for regulation, public education of new emerging technologies and weapons should be a top priority. And finally, the counterarguments to Moreno's reasoning and conclusion provide a solid basis for a call for a thorough impartial investigation. A 60 minute-style investigation is needed because of the growing numbers of mind control allegations. Mind Justice will continue to research and disseminate information in the public forum. The public can now join the real debate underneath the conspiracy label, although it will not be easy. Conspiracy labels are only dismissed with solid evidence. But now an informed debate can provide the possibility for change.