

On “Making History”

I. INTRODUCTION TO MAKING HISTORY

1. Do We Really Want to "Make History"?

While academic meetings on serious topics like "Science and Democracy" sometimes claim to "Make History", they rarely do so. Academics have no conception of how hard it is to actually "make history" in a literal sense.

There are at least two meanings for "Making History". The usual one involves priority--perhaps in making a scientific discovery or in breaking an athletic record. The second meaning involves influencing the course of history. This will be the meaning of "Making History" in this essay, except when noted in the text.

I believe that history can become a science--and a mathematical one at that. I believe history can be viewed as the study of the underlying historical processes that shape events over wide space-time segments. In this view, individuals can have only a very limited influence on underlying historical processes. Nevertheless, it is a historical fact that small groups of very dedicated individuals have sometimes succeeded in "making history" if they can manage to endure over an extended period of time.

This happens only under special circumstances: The group must exist at a "critical decision point". Critical decision points occur at times and places where an underlying historical process has the potential to evolve in more than one direction. Hence, "Making history" in a meaningful way is something like "surfing the waves of history".

I believe this second conference in Naples might be able to "make history". It happens to be held at a critical point – the turn of the 21st century. The question remains: Does anyone really want to "make history"? Making history is, at best, an arduous, chancy, and often thankless task – and likely to be dangerous as well.

2. Why We are at a Critical Decision Point in History

Currently the United States is in the underlying historical process of becoming the first 21st century World Hegemony.

In some ways this critical point in history resembles the Roman Empire at the time of Julius Caesar or to the start of some Chinese Dynasties. A relatively minor alteration in certain events –

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if Caesar had survived the Ides of March, for example – might have produced major changes in the evolution of the Roman Empire.

A side-effect of the historical process that drives the American Hegemony is that both science and democracy (as these words were used in mid-20th century U.S.) are now in the process of dying. Indeed, I believe that both science and democracy have now passed a "point of no return". In other words, neither is likely to be "reformed" or "revived" in the U.S. anytime in the near future.

It is possible that genuine science or democracy could survive in other nations and even flourish. On the other hand, a worst case scenario would be that the world might have to pass through several historical cycles before science and democracy can return to the world scene. In other words, the world might have to go through an historical cycle analogous to the Roman Empire and the Dark Ages before there was a new Renaissance.

One way that a small, dedicated group might try to "make history" at this critical point would be to consider plans for long-term processes to restore genuine science and democracy. For the immediate future, it might consider ways to keep science in countries other than the U.S. and Britain from being overwhelmed by the plans of the American Hegemony to force world science to serve Pentagon interests. For the worst-case scenario, the group might accept the difficult task of trying to preserve information about genuine science and democracy through a second Dark Ages. The hope would be that such preservation might facilitate a new historical cycle leading to a new Renaissance.

II. THE DEATH OF U. S. SCIENCE: THE BIG LIE

3. Is U.S. Science Really Dying ?

Is my assessment that U.S. science is dying overly pessimistic or is it simply realistic?

I have written six ink-print books with some relevance to this question. All of them are available in a book-like format, with additional commentary, in my 1998 CD-ROM, A HISTORY OF U.S. SCIENCE AND MEDICINE IN THE COLD WAR.

The decline of U.S. science began at end of World War II with the A-bomb attacks on Hiroshima and Nagasaki. U.S. soldiers occupying the cities were exposed to the low-level residual radiation from the bombs and their families were alarmed. It was politically expedient for the Pentagon to issue its first reassurances that "low-level radiation is harmless" although there was no valid scientific evidence for this claim. In their own self-interest, U.S. weapons scientists such as Edward Teller supported this claim although they had little or no knowledge of the relationship between low-level radiation and human cancer.

My CD-ROM presents scientific evidence -- much of it based on official data -- that this safety claim was false. Despite the conclusive epidemiological evidence that the Pentagon doctrine was a Big Lie, it remains as the official position of U.S. government agencies, including the U.S. health and science agencies. The U.S. scientific and medical establishment responded to widespread public alarm and concern about radiation hazards by publishing many papers and

books consisting of fraudulent research that supported the false Pentagon doctrine.

At first, I was surprised and disturbed by such actions of the scientists in top positions in the science establishment and wrote many letters to journals such as *Science*. They were not published and I finally realized the unpleasant truth: To many elitist establishment types, the interests of their colleagues who were weapons scientists and radiologists were far more important than the protection of the public health and safety.

This was the start of the Big Lie that became a cancer in U.S. science. The integrity of the U.S. National Academy of Science was gradually destroyed when it produced a series of fraudulent reports on radiation hazards in support of the Pentagon doctrine (BEIR Reports). This cancer spread to the U.S. National Cancer Institute about 1970 and subsequently to other components of the U.S. National Institutes of Health. By 1980, it had gradually metastasized through the infrastructure of U.S. science and medicine including the scientific societies, their technical journals, and key departments at prestigious U.S. universities (e.g. Harvard).

For practical purposes, the Pentagon had taken over U.S. science and medicine to insure that empirical research could not challenge its official doctrines during the Cold War. This takeover was largely achieved by the "power of the purse". A major part of the funding of U.S. science came from U.S. government agencies which were glad to cooperate with the Pentagon.

4. The End of the Golden Age of U.S. Science and Medicine

U.S. science is now dying from a cancer in science itself that was spread by the Pentagon. Even during the "Golden Age" of U.S. science and medicine – in the middle years of the 20th century – the cancer was invisibly spreading to vital organs. The details of this underlying historical process can be found in Chapter 3 of my 1994 book, *Fifty Years of Folly and Fraud "In the name of Science"*. Only an outline can be given here.

Even during the Manhattan Project which developed the A-bomb, it was already apparent to many of the physical scientists involved in the project that Pentagon management and genuine science are incompatible. One reason why Europeans were unaware of these ominous developments is that the U.S. mass media was under effective Pentagon censorship throughout the Cold War and thereafter. The underlying censorship process was primarily media self-censorship as a way to maintain Pentagon perks.

Europeans also seem to have been unaware of the tacit Cold War collusion between Pentagon and Soviet generals on issues such as nuclear weapons testing. Thus, despite the theoretical differences between capitalism and communism, the right-wing generals in the Pentagon saw eye-to-eye with top USSR generals on the practical aspects of nuclear tactics.

Thus, top generals on both sides of the Iron Curtain were equally enthusiastic about atmospheric testing of their nuclear weapons. They saw this as a major source of continuing funding; they were equally indifferent to the health consequences. The planning of the generals had relatively short time horizons. There was no reason to worry about producing radiation injuries to their own troops when they would not be noticed for 15 or more years.

The leaders of the scientific establishments on both sides of the Iron Curtain also saw eye-to-eye; both saw the wisdom of cooperating fully with the generals. Hence, the Pentagon doctrine that

low-level ionizing radiation is "harmless" was not only quickly accepted by the British and French science establishments, it was immediately accepted by the Soviet science establishment as well.

Once the Big Lie gained world-wide "scientific" acceptance, standards for judging statements made "in the name of science" had to change to accommodate these new realities. The empirical basis for science, "a theory must fit the facts", was gradually replaced by the usual political basis, "facts must fit the official theory". Technology might survive this reversal but it was the death of genuine science.

Hence, even at the height of the Golden Age of U.S. science and medicine, the underlying historical process that had produced the scientific productivity was disintegrating.

5. Long-Term Effects of the Big Lie: The Fate of the Atomic Veterans

The immediate effect of the Big Lie was to continue exposing large numbers of soldiers to "friendly fire" in numerous atmospheric nuclear weapons tests. The short-term effect of such exposures was invisible genetic damage with minor side effects.. The long-term effects on these soldiers was to cause massive suffering, disability, and eventual death from cancer and various other diseases.

In the U.S., these radiation-exposed troops became known as "Atomic Veterans". Since the Pentagon was widely regarded as more knowledgeable about nuclear weapons and weapons testing than any other military, the other major players in the Cold War felt compelled to imitate the United States and exposed large bodies of their own troops to this form of "Russian Roulette".

Later, when public opinion in the U.S. forced the Pentagon to do studies of the effects of low level radiation on the Atomic Veterans, most of the major players felt compelled to do their own "scientific" studies. The results of all of the official studies agreed: Low-level radiation was indeed harmless. Some of the more courageous scientists insisted that it was actually beneficial. When the Japanese did similar studies of the survivors of Nagasaki and Hiroshima, all of these Pentagon-funded and Pentagon-controlled studies found no evidence of harm to the survivors who had been exposed to residual low-level radiation from the A-bombs (though later studies by Japanese scientists showed reduced survival).

Clear excess cancer among the Atomic Veterans was shown by competent independent epidemiologists in later studies of U.S. official data. Solid cancers have a long "latent period" of roughly 14 years. Only after this length of time did troops exposed to "harmless" radiation begin to die off rather rapidly. Although most of these troops were much younger than other World War II veterans (like myself), the Atomic Veterans are now almost extinct. This one grim fact clearly proves the deadly hazards of low-level radiation beyond any scientific doubt.

Of the approximately 222,000 Atomic Veterans, how many cancer deaths were caused by their exposures? A simple calculation in my book FIFTY YEARS provides a rough estimate. In a cohort of servicemen who were not Atomic Veterans about one-third of all deaths would be from cancer. In the data from the 1946 CROSSROADS test 68%, about two-thirds, died from cancer. The estimated proportion of excess cancer deaths, about 0.22, multiplied by 222,000 is about 50,000 excess cancer deaths. The excess deaths from all causes add to death toll. This

demonstrates that the Pentagon "harmless" myth was a very deadly myth indeed!

Nevertheless, despite the massive scientific evidence that now refutes the Big Lie, the Pentagon doctrine is still accepted by establishment scientists worldwide.

III. THE DEATH OF U.S. MEDICAL SCIENCE: THE FATE OF CLINICAL TRIALS

6. Is U.S. Medical Science Dying?

Establishments always justify their existence with mythologies--distortions or their actual history. Science and medical establishments are no exceptions from this rule. For example, the mythology of science fosters the illusion of linear (or perhaps exponential) progress in science over time, the historical facts show the waxing and waning of individual sciences--and of the overall human enterprise called "science" There are clear cyclic patterns: Rapid progress is often followed by periods of stasis or even decline.

The cycles of different sciences are only weakly correlated. Thus, the "Golden Age" of the individual inventor (or small personal laboratories) was at the turn of the 20th century (Thomas Alva Edison is its model). The high point of physics was the theory of relativity early in the 20th century (with Albert Einstein the model). The high point of medical science was in the middle of the 20th century when the controlled clinical trial became the "gold standard" or "method of choice". The inside story of clinical trial illustrates why U.S. medical science is dying.

My study, the world's first clinical trial of chemotherapy for childhood leukemia, is an example of "making history" in its usual sense of priority or record-breaking. I planned (and reported on) this clinical trial in 1952. Many of the main methodologies of the modern clinical trial in the U.S. evolved from these continuing chemotherapy trials. While they achieved the first major new advance in the treatment of a cancer in half a century, this advance also led to the subsequent excessive prestige of clinical trials as the "gold standard". The unwarranted faith of both doctors and the American public in this particular scientific instrument led to fraud in "clinical trials" that have eroded the scientific value of the instrument.

While I was aware even the early days, that any scientific methodology has its limitations and can be misused, I too got carried away by the unexpected success. I mistakenly believed that clinical trials would finally end the abuse of patients and the money-making quackery of pre-scientific medicine. Sinclair Lewis's novel *Arrowsmith* gives a satirical but accurate picture of the bad old days.

Unfortunately, by the start of the 21st century, "clinical trials" had become a menace to the public health and safety!

7. Why Clinical Trials were not a Panacea for U.S. Medical Science

The commercialization of medical research, exemplified by the rise of biotechnology, not only ended the "Golden Age", it has often led to reversion of "science" back to alchemy. When the focus of drug-testing shifted from careful assessment of benefits and risks to faking both benefits

and risks to produce enormous profits for drug multinationals, the public no longer could trust claims made "in the name of science".

A headline in the newspaper, USA Today, on November 26, 2002 was: "Mistrust of doctors widespread across the USA". The report of survey results began: "Nearly 80% of blacks and 52% of whites believe they could be used as 'guinea pigs' for medical research." The story also noted how the highly publicized case of Jesse Gelsinger "raised questions about the safety of clinical trials". Indeed, the unnecessary death of this young man is a horrible example of the greed and stupidity of neo-alchemy at its worst.

Nowadays what the mass media calls "clinical trials" are often not controlled studies at all; they are examples of uncontrolled human experimentation by doctors paid by the multinational drug companies – sometimes in stock options. This malpractice has resulted in the death or serious injury of many thousands of American patients from the side-effects of highly advertised and profitable new drugs-drug that are more deadly than the potions of the ancient alchemists. The use of such grossly unscientific practices "in the name of science" has turned many concerned citizens against "clinical trials".

8. How Scientific Fraud Kills Genuine Science

One side effect of scientific fraud, whether it supports the Big Lie about radiation hazards or the smaller lies in the advertisements for deadly new prescription drugs is that it poisons the research environment and destroys genuine science in that area. A side effect of the wide use of fraud in what are supposed to be "clinical trials" is that it is killing U.S. medical science.

Here is a specific example of how medical fraud kills medical science.. A *Wall Street Journal* report on 12/18/02 starts out: "In a finding sure to shake up the \$20 billion market for blood pressure medicine, a 10-cents-a-pill diuretic proved superior to two of the pharmaceutical industry's biggest-selling classes of drugs in a major U.S.-funded study."

To protect the public, the FDA is supposed to rigorously test the efficacy and safety of new drugs before approving them for marketing. In this case, it failed to do a proper efficacy study for blood pressure medicines: FDA should have tested the new drugs against the standard treatment – the 10-cents-a-pill diuretic (commonly called "water pills") used in the U.S.-funded study. Why didn't FDA use "water pills"? Simply because FDA wanted to rush new drugs to market to please the Bush Administration. Proper FDA studies would have blocked the marketing and prevented this costly fraud.

III. THE DEATH OF U.S. DEMOCRACY: THE RISE OF THE AMERICAN HEGEMONY

9. The Death Knell of U.S. Democracy: The American World Hegemony

The A-bombs that ended World War II were a critical point in U.S. history. The Pentagon not only began the Big Lie that was to kill U.S. science; it became the first permanent standing army in U.S. history. During the Cold War, the Pentagon became "the tail that wagged the dog".

It was no longer merely a military force, it became a major political, economic, and social force in the United States. It also became a self-perpetuating process. Much as the Roman Legions eventually led to the death of the Roman Republic, the Pentagon will lead to the death of the American Republic in the 21st century.

The best evidence that the rise of American Hegemony is causing the death of American democracy can be found in the speeches of President George W. Bush exhorting Americans to a war with Iraq. The current public opinion polls have shown that about two thirds of the American public oppose a war with Iraq unless it is supported by the United Nations. The major nations on the U.N. Security Council have spoken out in opposition to an Iraq war but this only has infuriated George W. Bush. The U.N. inspectors have not found evidence that would support such a war.

Unfortunately, factual evidence never had much weight with the oil men who run the Bush Administration and only believe in their in-group ideology. Adverse polls are brushed off. The original support for Bush as a war president has steadily eroded as he proclaims his intention to start a war that can only benefit Big Oil. Even Republicans admit that the constant threats of war are blocking the U.S. economic recovery and hurting Wall Street.

Nothing illustrates more clearly the Bush Administration contempt for democracy than its grim determination to get the U.S. into a war with Iraq. Nothing demonstrates more clearly the final conversion of the U.S. from a peaceful country into a war state. One side-effect of this conversion into a war state will be the death of U.S. democracy.

10. Bad Money Drives out Good: How Fraudulent Elections are Killing U.S. Democracy

Electoral fraud is to democracy what scientific fraud is to science. Democracy and science are both strong enough processes to withstand occasional frauds. In theory, both have self-correcting systems built into the process which would ordinarily eliminate the fraud – within a month, a year, or a decade. However, the self-correcting systems won't work when the fraud is institutionalized by making it a part of the scientific or electoral process.

When a fraud such as buying votes in elections is nationwide and institutionalized, democracy can be destroyed since this makes a key component of this system – the voting process – virtually meaningless. Electoral fraud has occurred in the U.S. since the nation began, usually as an act of individuals, factions, or local political machines. When the fraud is operated on a national scale – as in the U.S. elections of 2000 and 2002 – democracy is in serious jeopardy. To meet this threat, laws limiting political contributions were recently passed but the Bush Administration has violated them with impunity. The deterioration of the democratic process has probably passed the point of no return.

Having won the 2000 presidential elections by lying TV attack ads, buying votes, and outright vote fraud in the 2000 election in Florida, the Bush Administration has used similar methods to buy the 2002 congressional election. In addition, President George W. Bush used his position as Commander in Chief to cover up his domestic and military failures by using his control of the U.S. mass media preempt the headline news with a preemptive war against Iraq.

His high ratings in the polls silenced his Democratic opposition. They did not dare to object to the lack of factual information supporting his calls for a war Iraq. They did not dare to point out

that Bush had failed to punish those responsible for the attack on America. This pitiful performance by the Democratic opposition insured that U.S. democracy "did not go out with a bang but with a whimper".

11. Plans for an American Hegemony to Replace American Democracy

The Bush Administration clearly believes that it can use its war powers and enormous political contributions to stay in power indefinitely and force a U.S. world hegemony on an unwilling world.

On Network News TV at the end of 2002, Bush and his advisers have called for war with Iraq almost daily: Bush has asserted a U.S. "right" to attack any nation which Bush believes possesses "weapons of mass destruction" before there is any actual use of such weapons. This drastic change in U.S. policy was made with little debate or discussion.

President George W. Bush makes no claim to being a "policy wonk". He remains in his long-standing role of front man for a clique of oil men-he is a "puppet president". This clique actually sets Bush's policies and runs his administration. Hence, the tiresome oratory against Iraq merely shows the determination of Richard Cheney and his cohort to create an American Hegemony that would rule the world in the 21st century.

Recently official documents were released which show that this clique was headed in this direction under the first President Bush. The election of Bill Clinton set this plan back for eight years. With the Bush victory in 2000, these plans were once again in motion. The plans for a U.S. world hegemony required Bush to unilaterally reverse the 20th century efforts to build international bulwarks against wars of aggression which Americans had long supported. By simply disregarding U.S. international treaty obligations (e.g., those which "interfered" with his missile defense agenda), Bush has adopted the tactics of Adolph Hitler: Treaties are merely "scraps of paper".

Few ordinary citizens anywhere in the world would want an American Hegemony, indeed few Americans want a Hegemony that would rule the world.. Unfortunately, world opinion means nothing to those who also want to rule the world.

IV. RESISTING THE HEGEMONY: PRESERVING SCIENCE AND DEMOCRACY

12. Can We do Anything Effective to Stop the Hegemony Juggernaut?

By "we", I mean people like you and me. Can we stop the Juggernaut? Perhaps not, but we may be able to slow it down a bit. In the short term, we can try to exploit out the weaknesses of the Hegemony plans. It is ironic that Bush's tax breaks for his wealthy friends have so seriously weakened the American economy. Since other nations have extensive investments in the U.S., it makes fiscal sense to move these investments out of the U.S. – especially if there is a prolonged war with Iraq. This withdrawal of capital would hit the Bush administration where it hurts: It would force Bush's wealthy backers in the U.S. to reconsider whether spending money and lives on an Iraq war might not end up bringing down a shaky U.S. economy.

Again, from a military standpoint the U.S. is not all-powerful in the short term. The U.S. has technological military superiority on the sea and in the air. However, it is not all-powerful on the land. Hence, if major nations can work quietly together to deny the U.S. bases and resources that it needs for a war with Iraq, Bush may find that creating the Hegemony is not as easy as it may seem.

13. Long Term Strategies for Preservationists

If all short-term plans fail, it would be worth considering long-term strategies for preservation of the concepts of genuine empirical science and republican democracy during a second Dark Ages.

These might be developed by careful study of the informational sources of the original Renaissance. Many of the strategies and techniques of the Italian Renaissance may be applicable in 21st century Italy. This historical precedent may also make it easier to explain the need for an interregnum game plan; it might justify the raising of funds and acquisition of special resources to preserve science and democracy.

Planning should not anticipate a simple "rerun" situation. Those who seek to maintain their power by suppression of genuine science and democracy also have the guidance of history in their efforts. While keeping down any rising contemporary Hegemonies would be the top priority of the Bush Dynasty during the first years of the 21st century, it would have ample technological resources to suppress any perceived ideological threat.

Thus, while the Bush Dynasty will focus on breaking the power of U.S. unions, of environmentalists, of Democratic politicians, of health activists, and of anti-establishment citizens groups, the extensive new electronic surveillance by a paranoid Bush Administration may catch the Preservationists. To succeed, Preservationists would have to try to be as unthreatening and invisible as possible – to stay in the background.

Although setting up sanctuaries for ideas and technical knowledge is not a noisy process, Preservationists must avoid the temptation to use the mass media to enlist support. In the early years of the 21st century the Internet should be very useful. However, it will be increasingly restricted and subjected to automated electronically surveillance. Hence, alternative channels of electronic communication need to be developed.

V. SUMMARY AND CONCLUSIONS

1. Those attending the second Naples Conference (virtually or in person) have a unique opportunity to literally "make history" if they are willing to assume onerous and uncompensated responsibilities for the preservation of key ideas and techniques of genuine science and democracy (in the short-term or, if the second Dark Ages are coming, in the long-term).
2. Pentagon takeover of the infrastructure of U.S. science and medicine has resulted in the end of the mid-20th century Golden Age. Scientific fraud and commercialism have led to the death of genuine science in the U.S.
3. Vote-buying, media-control, and fraud in the electoral process by the Bush Dynasty has led to the death of American Democracy and its replacement by an American Hegemony.

4. Preservationists trying to slow or stop the Hegemony juggernaut face a dangerous, persistent, and powerful adversary. At an intellectual level, preservationists can counter the propaganda about the wonders of U.S. science and medicine. They can disseminate the sad truth: 85% of the current "breakthroughs" reported in U.S. media – both in the mass media *and* in technical journals – are trivial, erroneous, or outright fraudulent.

5. Probably Europeans are in the best position to carry on the good fight for genuine science and democracy in the 21st century. The American Hegemony will do its best to destroy both.