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NEXUS

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**HAARP: a US weapon
of mass destruction?**

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of Depleted Uranium**

Rockefeller Globalism

The Siberian Installation

**Mysterious giants and
ancient earth mounds**

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• Mad Cow Disease • Prehistoric Map of the Urals •

NEXUS

NEW TIMES MAGAZINE

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STATEMENT OF PURPOSE

NEXUS recognises that humanity is undergoing a massive transformation. With this in mind, NEXUS seeks to provide 'hard-to-get' information so as to assist people through these changes. NEXUS is not linked to any religious, philosophical or political ideology or organisation.

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Editorial

It's hard to believe that in the two months since I last stared at the computer screen, wondering where the wise words for editorials are hidden, Iraq has been invaded and 'conquered', a NEXUS Conference has been held in Europe, I've manned the NEXUS stall at the Sydney Mind Body Spirit Festival, and we've almost finished another issue.

First up: the invasion of Iraq. Where do I start? Probably the most overtly outrageous feature of the 'war', for me, was the image of Saddam Hussein's statue being pulled down. Prior to that moment, most people may have been feeling pangs of guilt at the 'collateral damage' caused by the coalition forces. But the statue's demise amongst cheering crowds of Iraqis was a staged event. The 'average person' out there, bombarded with media coverage of that moment, was being made to feel assured that the Iraqis were happy at being 'liberated' by America. This 'assurance' has translated into an *increase* in the popularity of the coalition 'leaders', according to the polls, and the spin doctors use this as further validation of this new era of pre-emptive strikes that are in defiance of international law.

While I'm on the subject, many of these strikes utilised depleted uranium munitions. So, for this issue, I've found the best background paper on the subject, written by a nuclear health physicist who helped in the DU 'clean-up' after Gulf War I and is himself a victim.

While depleted uranium missiles recently rained down upon the citizens of Iraq, the NEXUS Conference was being held in Amsterdam. As our conferences have usually been held in Sydney over the years, it was gratifying to see so many readers come to a similar event in the northern hemisphere. The conference was a tremendous success and everyone thoroughly enjoyed themselves. Herman Hegge, of Frontier Sciences Foundation, is to be congratulated for his organisational skills, and it's great news that he's scheduled the next conference for late March 2004 in Amsterdam. We'll continue our Australian conferences in due course, but the next one will be held somewhere in southeast Queensland.

While I was manning our stall at the Mind Body Spirit Festival, I was asked by most visitors what I thought of the recent Pan Pharmaceuticals product recall here in Australia. Was it a full-scale attack on natural therapies and complementary medicines by the drug-industry-run bureaucracy? At the time I wasn't sure, but now I'd say it seems the gloves are coming off. It almost looks as if they *knew* the Pan Pharmaceuticals scandal was coming and were prepared. Suspiciously hot on the heels of the drug recall, there have been media beat-ups on the dangers of vitamins, supplements and alternative medicines, government proposals to amend the Therapeutic Goods Act, and inquiries into the safety and effectiveness of natural medicines (with little focus on the dangers of pharmaceutical drugs). Whether we like it or not, Australia, New Zealand, Canada, the UK and USA are to 'harmonise' health safety standards with those of the EU trading bloc. This will mean big changes for everyone in the alternative health industry, and consumers will have far less choice in quality health products and services. If you don't make noise now, this is the beginning of the end for genuine alternative health products in these countries.

Meanwhile, NEXUS continues to expand internationally. We will soon have editions in Swedish, Finnish, Russian, Spanish and Yugoslav languages, but we are still looking for the elusive German publisher interested in producing NEXUS in that part of the world.

Regarding matters Russian, we have two intriguing interviews this issue that are representative of a new wave of connections coming out of the region. Of particular interest is "The Installation", which I know will get the phones and emails running hot. We hope to have a more in-depth article on the subject for next issue, so please don't contact me yet for any updates. While you ponder the implications of the Installation, you may also want to read the interview with the Russian scientist who discovered the 120-million-year-old stone map in the southern Urals (as reported in NEXUS 9/04).

Our article on the unexplained is about Giants—specifically, the mysterious skeletons of giants found in northeastern USA within the equally mysterious earth mounds. Who were these people and why do mainstream archaeologists deny their existence?

You must also read Tesla's "Talking to the Planets" essay of 1901; it gives a glimpse of technologies that are deliberately being hidden from our view, but are likely being employed at installations like HAARP in Alaska. We also have an article on HAARP...

Duncan

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Letters to the Editor ...

A Captive Audience...

Dear Duncan: Thank you for standing in the gap and putting out such a faithful instrument as NEXUS, in which these brave contributors you call authors, researchers and scientists can put forth their work to true peer review—us, the masses!

Your magazine's content has become fuller and more usable in the past few years, and your advertisers less specious. Bravo! The fruits of your vision and dedication are evident. Thanks for not going out of business.

I can speak for many at the bottom of the Western socio-economic pyramid, especially the two million of us behind bars, most for drug-related offences, here in the USA.

Your magazine gives us hope. Your contributors, though varied in academic profundity, instill ideas in our imaginations of change, transformation and renewal of not only our lives but the larger world we will enter again soon.

So keep up the good work—and if you need a leg broken, just drop me a line. (I'm joking, of course!)

Guy S., Globe Prison, AZ, USA
PS: Please forgive the pen and ink. The prison officials don't allow us the use of word processors or typewriters, even in minimum security.

[Hi, Guy: I'll forgive the pen and ink if you'll forgive my pun in the title of your letter! Ed.]

Dr Dan Burisch Sighted

Dear Duncan: I understand that you published an article after Dan Burisch's death was reported last year [NEXUS 10/01]. I wanted to advise you that I have discovered that those reports were tainted, and I now have proof that Dr Burisch is alive. I have photographs to prove it.

About two months ago I was given information pointing to an operation, possibly involving Dan, that was scheduled to take place at Frenchman Mountain last month [February].

I was urged to go and make a determination as to whether Dan was alive or if it was somebody

who simply looked much like him who was standing in for Dr Burisch. I altered my travel schedule and made arrangements with Alan Guiditis, the regional director of MUFON in Las Vegas, to accompany me to the mountain on the appropriate date.

Together we photographed the operation that took place, and I was able to positively identify Dr Dan Burisch as a participant. I also have some tape of the radio chatter in which Dan's voice is clearly audible.

If I could help set the record straight, or provide documentation for a follow-up article for NEXUS, please let me know. I will do all I can to help.

Sincerely,
BJ Wolf

[Thanks, BJ: Glad to hear some news about Dan's "disappearance". Hopefully one day we'll have more to publish on his intriguing research. Ed.]

Radiofrequency Risks

Dear Duncan: Thanks for another great edition. I am writing re an item in NEXUS Global News 10/03, entitled "Radio Frequencies Used to Kill Destructive Pests". It's good news that methyl bromide will possibly be replaced by radiofrequency waves, but is this another hazard?

As these waves can make molecules vibrate and heat up in the same way as in microwave ovens, does this mean that, as William P. Kopp tells us, the molecular structure of the food will be damaged and new chemicals created, some of them known carcinogens? Or am I overreacting?

I bet your readers would be really interested in any facts you can find on this subject.

Cheers,
Wilma Tait, Isle of Wight, UK

Secret Base in the Solomons?

Dear Duncan: As a long-time reader of NEXUS Magazine since the early 1990s when I was still in Papua New Guinea, and then when I moved into LA, USA, and now here in the Solomon Islands, I always see to

it that I receive your highly prized magazine every issue.

Reading and re-reading both books on underground bases by Dr Richard Sauder made me more likely to believe that there's a secret underground or underwater base here in the Solomon Islands, located at the western side of Makira Province Island. This is near the epicentre of a strong earthquake early this year—a nuclear testing, maybe?

Since the early 1960s there have been a lot of stories circulating amongst the local residents of a black unmarked aircraft that suddenly hovered above their villages. White (and black) people in military uniforms suddenly appeared in the villages from nowhere, and could speak the local people's language. They sometimes distributed unlabelled canned goods and other foodstuffs to the villagers.

During the '70s and '80s there were reports of young children who went missing for a week or two and then suddenly reappeared near their houses. Most of these children were aged 3–5 years old. Some of them can remember going into a big house (a cave, maybe?) at the time they went missing, and told their parents stories that adults cannot and will not believe or understand.

If you remember, I sent you a photograph of a UFO that I took on 29th December 1999; it was hovering above the township of Noro in the Western Province of the Solomon Islands. I now suspect that said UFO originated from West Makira Island.

Are there any readers who can offer further information to our people here in the Solomon Islands about this mystery?

Sincerely yours,
Sri Ramon Jun Quitales, II,
Solomon Islands, rquitales@hotmail.com

US Flag Signalled SOS!

Dear Duncan: I have heard from several sources that one of the main reasons why the Illuminati has begun this war in the Middle East, which is to last 27 years, is to bring about the demise of the US government

and economy so that there can be a One World Government.

Did the Illuminati let the whole world know about this a couple of weeks ago? I did not see it on television, but I saw it in the papers. When the American soldiers conquered Baghdad, they put up the American flag. But they made one mistake: they put it upside down! Or so I thought. Turns out that it wasn't a mistake at all! It was done on purpose!

A week later, while I was listening to *Coast to Coast* with George Noory (Art Bell's old program), Richard C. Hoagland mentioned the flag incident. He said the soldier, who put the flag upside down temporarily before "righting it", was being interviewed on the *Larry King Live* show on television.

Larry King also was under the assumption that the soldier had made a mistake, and he commented on it. To his surprise, the soldier answered that he hadn't made a mistake. His captain *told him* to put the flag upside down for a few minutes, then take it down and put it back up the right way. Larry King asked him why his captain ordered him to do that, and the soldier said he didn't know.

Richard C. Hoagland said that every military and government official knows what is meant when the American flag is flown upside down. It means: America is in dire distress! *It is an SOS!* And what amazed Richard was that everyone in the entire world saw this and not one military official or government official said one word about it!

They all know what it means when the flag is flown upside down, and not one of them said a word about it! The soldier and captain were not even apprehended. So what does that tell you?

Brenda B., Costa Mesa, CA, USA (but for how long?)

Death by Doctoring Must End

Dear Editor: I recently had a loved cousin suffer through four years of "accepted" medicinal procedures—*ergo*, chemotherapy—for her ovarian cancer. I tried to tell her similar things that

... more Letters to the Editor

NB: Please keep letters to approx. 150 to 250 words in length. Ed.

appear in your "Death by Doctoring" article parts 1 & 2 [NEXUS 9/05, 9/06], but, as is so often the case, her "specialist" caused so much fear in her that she didn't look into anything outside "accepted" medicine. And so goes the battle.

What really raises my ire is that the doctors have my whole family convinced that they gave her four "good" years that she would otherwise not have had: four years without hair, of doubling over retching uncontrollably after every chemo session, of being so weak most of the time that all she could do was lie in bed—and on and on, *ad nauseam!*

I would like to think that many of the specialists who pander to these procedures actually think they are doing the best thing for the patient. These doctors read their journals and take what is written as the gospel truth and all that is printed therein as the latest in medical science. With this in mind, they blindly administer the protocol as it is spelled out.

I intend to make copies of the "Death by Doctoring" article and deliver them by hand and "snail mail" to everyone I can think of, both in the medical field and out, who would be even remotely interested in the material.

I feel that the only way we are going to bring about a change in our existing medical procedures and break the stranglehold that the pharmaceutical companies have over it all is to inform the public until they cause such an uproar that something has to be done. Does this meet with your approval?

I was brought face to face with a medical situation a few years ago when our city was about to implement a program to fluoridate our water supply. A small group of us began digging into this issue and found out that it consisted of nothing more than the dumping of the toxic waste by-products of the aluminium, steel and fertiliser industries' processes into virtually every water supply in the country and getting them to pay for it in the process.

We gave packets containing all

the data we had collected to every member of our city council and attended and spoke at many of their meetings as well as held numerous informational meetings city-wide. The bottom line is that our city council voted not to do it! A victory that is almost unprecedented in this day and age!

I have not had the chance to "browse" your website yet, but I would hope to find similar articles on amalgam teeth fillings, aspartame as a sweetener, more info on fluoridation, how the homogenisation process of milk changes it into a very unhealthy substance, and anything else dealing with present-day medical procedures and food processing that is contrary to our health and well-being.

I would appreciate it if you would point me in the proper direction to find this information. Thank you!

Bill Alexander, Washington, USA, billmar6@attbi.com

[First up, all readers have my permission and encouragement to share, reproduce and copy our articles as far and as wide as they wish, as long as there is no charge to the recipient. And Bill, as for a pointer to articles on those subjects you mentioned, just visit our website. We have free articles on all those issues and more. Ed.]

Sai Baba Allegations Grow

Duncan: In exposing sexual abuse of male youths by Sathya Sai Baba, India's most famous guru, the NEXUS article in 1999 on the accusations were tremendously seminal [see 7/05]. The three testimonies presented alleged serial sexual molestations of young males from different countries, as well as other crimes.

NEXUS tested many Sai Baba-related sources independent of our own. Your confirmation of the integrity of the evidence, and publishing of the article, certainly assisted our extensive and worldwide investigations and campaign.

Devoted to Sai Baba for 25 years, I spent a few years around him and taught English literature

(1978–79) at his college in Whitefield, via Bangalore—the first of several large boys' colleges which Sai Baba founded. I now assist with exposure activities.

Sai Baba's devotees are legion in all the top Indian power structures. Witlessly, they and millions of Indians sink at his feet, declaring him a national treasure—the greatest divine incarnation ever—and believe him when he says that he will save the entire world, with India leading the rest of us. A powerful incentive to belief are the ostensible miracles.

We continue to expose fraudulence, but not all the phenomena—whether related to him personally or to worldwide manifestations in countless homes of devotees, etc.—submit to rational explanation.

A common response to the three NEXUS article testimonies was that they had the "ring of truth". One of the authors was Dr Terry Gallagher, a scientist and formerly a highly respected leader of the Australian Sai Organisation. Long before the NEXUS article came out, his efforts to investigate properly the allegations of sexual molestation had been heavily suppressed by T. Ramanathan, the head of the Sathya Sai Organisation of Australia and Papua New Guinea. Dr Gallagher resigned on the basis of high principle—as have many others since, the world over.

Another highly respected leader, Stephen Carthew, a documentary filmmaker, submitted shortly after the NEXUS article was published that the allegations be discussed by the rank and file. Summarily, Ramanathan, a retired lawyer and former President of the Sri Lanka Law Society, cast him out.

Worldwide, courageous and truthful individuals received the same draconian treatment. Hundreds of people have come forward with more information. These include former devotees from many countries, some of whom have spent over two decades closely involved in Sai Baba's work.

Allegations against Sathya Sai Baba mainly relate to serial sexual abuse of minors and young men, but some relate to Sai Baba's complicity in police executions in his private apartments at Puttapparthi in 1993.

Coming from many countries and educational backgrounds, we have exposed Sai Baba and his accomplices in major venues. We have precipitated well-researched articles in the press of countries such as Australia, Canada, Denmark, Chile, Germany, Holland, India, USA, UK and Sweden.

Early last year, the Danish Broadcasting Company aired a 50-minute documentary on the Sai Baba exposé, titled *Seduced*. Promptly, the municipal authorities rescinded the sale to Sai Baba devotees of the famous Arresødal castle in Copenhagen, which was to have been used as a Sai international school.

However, the Indian power structure constantly obstructs our efforts, including the media—with the honourable exceptions of *India Today* and the unique and brave Ramana Murthy, Editor of *Vijayavihaaram*. Indian Prime Minister A. B. Vajpayee and three high-profile co-signatories of a public letter say that our contentions are "wild, reckless and concocted allegations made by certain vested interests and people against Bhagawan Sri Sathya Sai Baba".

After hearing of our allegations and having them investigated, the Vice-Chancellor of the University of Adelaide, South Australia, withdrew permission for the University to be used as a venue for the Sai National Conference that was scheduled for April 18–25, 2003.

There is a growing network around the planet of people calling for a properly constituted official enquiry and action by governments around the world.

More information can be found at the following websites:

- <http://www.exbaba.com>
- <http://www.saiguru.net>

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MONSANTO'S GE SOY MONOPOLY UPHELD

In a jaw-dropping affirmation of Monsanto's monopoly control over commodity crops, one of the world's most notorious patents for genetically engineered crops was upheld on May 6 by the European Patent Office (EPO) in Munich—this despite a nine-year battle by civil society (and industry) to have it revoked.

European Patent No. 301,749, granted in March 1994, is an exceptionally broad "species patent" which grants gene giant Monsanto an exclusive monopoly over all forms of GE soybean varieties and seeds, irrespective of the genes used or the transformation technique employed.

The patent, attacked as immoral and technically invalid by food security advocates worldwide, was vigorously opposed by Monsanto itself until it purchased the original patent-holder (Agracetus) in 1996 and switched sides to make the soybean species patent a major ingredient in its global recipe for crop monopoly. Monsanto now controls 100% of the world's genetically engineered soybeans, covering 36.5 million hectares in 2002.

The ETC Group (The Action Group on Erosion, Technology and Concentration, formerly RAFI) has been opposing the patent for nearly a decade. It regards the maintenance of this patent as a dangerous precedent for other broad claims on



emerging new technologies, in particular nanotechnology—the atomic manipulation of matter to create new molecular forms.

"We fear that the EPO decision on Monsanto's soybean patent gives comfort to those who want to establish ever wider legal claims—including matter monopolies," emphasised Jim Thomas of ETC Group's Oxford, UK, office.

"Monsanto may have won an entire species, but others are seeking to monopolise entire elements of nature. Atomic-level manufacturing provides new opportunities for sweeping monopoly control over both living and non-living matter."

(Source: ETC Group news release, May 7, 2003, <http://www.etcgroup.org>)

MURDOCH COMPANY TO MIND BRITISH OFFICIAL SECRETS?

In an official British "written ministerial statement" quietly released late on Friday evening, March 14, while MPs and the media were focused on the approaching conflict with Iraq, the Junior Defence Minister, Dr Lewis Moonie, confirmed that the Ministry of Defence (MoD) had decided to privatise the storage of top-secret Ministry files.

The statement, published in Hansard (column 29WS), also confirms that the preferred bidder is TNT Express Services, owned by the media magnate Rupert Murdoch, proprietor of the London *Times* and *Sun* newspapers.

Within two years, TNT will relocate the records service of the MoD and 13 other government departments—including the Home Office, the Crown Prosecution Service (CPS), the Public Record Office (PRO), the Metropolitan Police Service and the Lord Chancellor's Department—from secure MoD warehouses at Bourne Avenue, Hayes, Middlesex, to new facilities in the Midlands.

The site will provide secure storage for a possible 200 linear kilometres of official paper records, and TNT will also be responsible for "the provision of records management and archiving services" for a 25-year period.

(Source: Intelligence, no. 420, April 7, 2003)

NRO WANTS TO "KNOW EVERYTHING"

At a March 12 hearing of the US Senate Armed Services Committee, Peter B. Teets, Director of the National Reconnaissance Office (NRO) which develops, launches and operates US spy satellites, said: "Our goal is transparency. We want the ability to see everything and know everything, while simultaneously denying our adversaries both the ability to do the same, and the knowledge that such capabilities are being used against them."

"We have 12 national security space launches scheduled for 2003, compared to only one conducted in 2002," he added.

Mr Teets, who is also an Under-Secretary of the Air Force, provided a rare public description of "offensive counter-space" (OCS) programs for disabling other



countries' satellites.

"We currently have two OCS projects underway. The first is the Counter Communication System (CCS), a capability intended to disrupt satellite-based communications used by an enemy for military C3, and scheduled for 2004. The second is the Counter Surveillance Reconnaissance System (CSRS), intended to impair an enemy's ability to obtain targeting, battle damage assessment and information by denying their use of satellite imagery with reversible, non-damaging effects," Mr Teets testified.

At a March 12 Air Force press briefing on "military space", the Air Force Director of Space Preparations, Major-General Judd Blaisdell, said: "We are so dominant in space that I pity a country that would come up against us."

(Source: Secrecy News, from the FAS Project on Government Secrecy, vol. 2003, no. 23, March 18, 2003, <http://www.fas.org>)

SADDAM WAS A KEY CIA ASSET FROM THE LATE 1950s

While many have thought that Saddam Hussein first became involved with US intelligence agencies at the start of the September 1980 Iran-Iraq War, his first contacts with US officials date back to 1959 when he was part of a CIA-authorized six-man squad tasked with assassinating the then Iraqi Prime Minister, General Abd al-Karim Qasim.

In July 1958, Qasim overthrew the Iraqi monarchy in what one former US diplomat described as "a horrible orgy of bloodshed". In the mid-1950s, Iraq had been quick to join the anti-Soviet Baghdad Pact which was to defend the region, and whose members included Turkey, Britain, Iran and Pakistan. But the US paid little attention to Qasim's bloody regime until his sudden decision to withdraw from the pact in 1959. Washington watched in marked dismay as Qasim began to buy arms from the Soviet Union and put his own domestic communists into ministry positions of "real power", according to a former senior US State Department official.

The assassination was set for October 7, 1959, but it was completely botched. Qasim escaped death by hiding on the floor of his car, but Saddam, whose calf had been grazed by a fellow would-be assassin, escaped to Tikrit, thanks to CIA and Egyptian intelligence agents. Saddam then crossed into Syria and was transferred by Egyptian agents to Beirut, where the

CIA paid for his apartment and put him through a brief training course. The agency then helped him get to Cairo.

One former US government official, who knew Saddam at the time, said that even then Saddam "was known as having no class; he was a thug, a cut-throat".

The agency quickly moved into action. Noting that the Ba'ath Party was hunting down Iraq's Communists, the CIA provided the submachinegun-toting Iraqi National Guardsmen with lists of suspected Communists who were then jailed, interrogated and summarily executed.

Agency sources told UPI that the mass killings, presided over by Saddam Hussein, took place at Qasr al-Nehayat—literally, the Palace of the End.

(Source: by Richard Sale, UPI, April 10, 2003, <http://www.upi.com/view.cfm?StoryID=20030410-070214-6557r>)

EU CHALLENGES AUSTRALIA'S QUARANTINE RULES

The European Union has decided to request Australia to enter into WTO formal consultations on its quarantine system for imports of agricultural products.

EU Trade Commissioner Pascal Lamy said: "Australia has built a quarantine system which is highly efficient at blocking the import of agricultural products into this country. We believe this system flagrantly breaches WTO rules, despite Australia's constant claims to be the only beacon of free agricultural trade."

The rules which the EU considers the Australian quarantine system breaches are set out in the Agreement on Sanitary and

Phytosanitary Measures (SPS), which covers regimes dealing with human, animal and plant health.

Some of the market access problems faced by EU exporters include: an outright ban on the import of a range of agricultural products such as fruit and vegetables; extremely long and complex risk assessment procedures; and extremely restrictive conditions applied to imports, even when access is finally granted.

Australia's quarantine system has been challenged in the past. In 1998, following a complaint by Canada and the USA, the WTO ruled that the Australian quarantine system for salmon violated WTO rules.

(Source: EU Commission release, March 31, 2003, http://europa.eu.int/comm/trade/miti/dispute/index_en.htm, via StopWTORound@yahoo.com)

EARTH'S FIELDS SOON TO FLIP

In recent years, the Earth's magnetic field has been behaving in ways not previously seen in the admittedly short time it has been monitored.

The magnetic field not only shields us from harmful cosmic rays but also funnels charged particles shed by the Sun towards the magnetic poles, where they can produce beautiful auroral displays. But it is getting weaker.

David Kerridge, of the British Geological Survey, told BBC News Online: "There is strong evidence that the field is decreasing by about five per cent per century."

Some researchers suggest that it could be the start of a geomagnetic reversal,



"That's the 93rd successful test of the Anti-Gravity machine. It's also the 93rd prototype we'll never see again."

... GLOBAL NEWS ...

when the strength of the Earth's magnetic field decreases and then returns a few thousand years later with the north and south magnetic poles reversed.

Magnetic measurements made on the surface suggest that a region of the Earth's core under South Africa is of a different polarity to the rest of the magnetic field in the core. It may grow and initiate a flip, or it may die down.

(Source: *BBC News Online*, March 27, 2003, <http://news.bbc.co.uk/go/pr/fr/-/1/hi/sci/tech/2889127.stm>)

EU CALLS FOR INVESTIGATION OF ASPARTAME DANGERS

The European Parliament has called for an investigation of aspartame (aka NutraSweet, Equal, Canderel, E951, Spoonful, Benevia, etc.) as part of a drive to make sure that foodstuffs and drinks consumed in the European Union are safe.

A document from the European Parliament says the justification is that: "...the use of aspartame increases the exposure to its metabolites methanol/ formaldehyde and phenylalanine and is reported to provoke headaches, nausea and allergic reactions, especially in the case of vulnerable persons. Its widespread use should therefore be re-evaluated by the Commission and the relevant scientific committees, taking into account all available data and respecting the precautionary principle. An historical evaluation is required as there seems to be evidence that original studies did not prove the safety of aspartame."

There is also a call for proposals to improve the labelling of products containing aspartame, and the Parliament wants the new directive to be implemented in the member states within a year of its entry into force. There is concern about a lack of labels warning of health risks to the pregnant woman and the foetus—and rightly so, since aspartame is an abortifacient and a teratogen. It also stimulates prolactin. It is an endocrine-disrupting chemical. It also changes the menses, triggering infertility. A woman who goes off aspartame and gets pregnant may lose her baby if she goes back onto it.

The manufacturer and the FDA have steadfastly refused to put a warning on aspartame, even though they have full knowledge of how it can destroy the foetus or trigger birth defects.

(Source: from Betty Martini, *Mission Possible International*, April 12, 2003, <http://www.dorway.com>)

SWISS CANTON STOPS FLUORIDATION AFTER 41 YEARS

On April 9, the Great Council of the Swiss Canton Basel-Stadt, on a motion brought forward by the Commission for Health and Social Issues, totally repealed the "Resolution of the Great Council concerning the introduction of fluoridation of drinking water for the control of caries". The fluoridation of drinking water, initiated by Basel-Stadt on May 2, 1962, was thus stopped after 41 years. The reasons were:

- The preventive effect of the fluoridation of drinking water could not be

proved by any study. When specialists do not succeed in producing definite proof in 40 years, the practice has to be abandoned.

- In spite of the fluoridation of drinking water, dental caries have been on the increase in children.

- The danger of fluorosis is played down; indeed, there is no discussion about fluorosis of the bones. The fluoridation of drinking water is particularly problematic in the case of young children and babies.

- Less than 1% of the fluoride in drinking water is actually used for "prevention of caries"; more than 99% of the fluoridated water is used for washing, cleaning, industrial production, etc., and thus only pollutes the environment—a very undesirable imbalance.

(Source: *Forum for Responsible Application of Science*, Basel, April 27, 2003, <http://www.nux.ch>, via <http://npwa.freeserve.co.uk/>)

PENTAGON STAGED SADDAM STATUE'S FALL

One of the "most memorable images of the war" in Iraq was the footage and photographs showing a crowd of Iraqis pulling down the statue of Saddam Hussein in Fardus Square in Baghdad on April 9, after US armed forces invaded the capital.

The BBC hailed the video and photos as recording a "momentous event", with the media being "a witness to history". Bush declared it "a historic moment". For Donald Rumsfeld, these images were "breathtaking". *But this image was staged.* The spin-doctors of the US media and the Pentagon produced a close-action video of the destruction of the statue that was supposed to be proof of a massive civilian uprising against the Iraqi government.

A Reuters photojournalist exposed this media event as a sham. The Marines had cleared out the area and ringed Fardus Square (across the street from the Palestine Hotel, where foreign journalists are based) with tanks. A hand-picked group of approx. 150 Iraqis, with some Marines, was allowed into the sealed-off area. A US military vehicle pulled down the statue.

The Pentagon wanted journalists to sell this occupation as "liberation" to people in the US and around the world. In fact, the United States Armed Forces psychological operations motto boasts: "Win the mind, win the day!"

The wrecking of the Saddam statue was part of a psy-ops media campaign.

(Source: *Workers World News Service*, April 24, 2003, <http://www.workers.org>)



"Place another Positions Vacant ad in the newspaper for our Black Holes dept. Our staff there keep disappearing."

LANDMARK WARNING ON MERCURY USE IN DENTISTRY

For the first time anywhere in the USA, dentists will be required to post a warning about the dangers of mercury in their dental fillings. On January 7, a California Superior Court judge finalised the language for the warning and ordered the California Dental Association to send it to dentists by March 9. The warning reads as follows:

"Notice to Patients: Proposition 65 Warning: Dental Amalgam, used in many dental fillings, causes exposure to mercury, a chemical known to the state of California to cause birth defects or other reproductive harm. Root canal treatments and restorations, including fillings, crowns and bridges, use chemicals known to the state of California to cause cancer. The US Food and Drug Administration has studied the situation and approved for use all dental restorative materials. Consult your dentist to determine which materials are appropriate for your treatment."

The warning is the result of a lawsuit filed by the law offices of Shawn Khorrani on behalf of As You Sow, a not-for-profit foundation dedicated to advocacy and activism in the public interest.

(Source: *MercuryPoisoned.com*)

VICTORY FOR GULF WAR SYNDROME VETERANS

Gulf War syndrome campaigners were yesterday [May 5] claiming victory after the UK Ministry of Defence announced it would not appeal against a ruling by the war pensions tribunal, accepting a link between the condition and vaccinations given to the armed forces.

Alex Izett, 33, a former lance-corporal who developed brittle bone disease after the 1991 conflict—but never went to the Gulf—said it was a "watershed" moment in the battle to have the condition officially recognised.

The decision by the MoD not to challenge the ruling that Mr Izett's osteoporosis was caused by a cocktail of drugs before his planned deployment could have significant implications for thousands of veterans suffering from the syndrome. Because Mr Izett did not go to the Gulf, the ruling adds weight to the veterans' argument that their ailments have been caused by the injections of untested and experimental vaccines they were given, and not by anything they may have encountered in the field.

(Source: *The Guardian, May 6, 2003*)

BEHIND WASHINGTON'S DEMAND TO LIFT IRAQ SANCTIONS

The issue of lifting the sanctions on Iraq is shaping up as the next big confrontation in the UN Security Council, which now has control over at least US\$30 billion held in its Oil for Food accounts—funds accumulated from the sale of Iraqi oil during the sanctions regime. The US has appointed itself the overseer of Iraq and the force that will hand-pick a new government. But the sanctions prevent the money from going to Iraq. So the US wants an end to sanctions so that these billions of dollars can be turned over to a US-administered government in Iraq.

In addition, Iraqi money worth billions of dollars has been frozen since August 1990 in accounts around the world. An end to sanctions could be a first step in making this money available to a US-controlled "Iraqi government", which would then turn it over to US corporations that have been awarded contracts for the "reconstruction" of Iraq. The US campaign to end the sanctions and turn the billions in withheld Iraqi funds over to itself, the occupier, is piracy in its most blatant form.

France, Russia and China all have veto power over whether to end the sanctions. Various countries on the Security Council have reminded Washington that sanctions cannot be lifted until UN weapons inspectors confirm that Iraq has no weapons of mass destruction, which diplomatically throws in Washington's face the same fraudulent excuse that the US government used for 13 years to continue the sanctions.

France has further enraged the Bush administration by proposing that civilian sanctions could be "suspended" for humanitarian reasons. By stating that it was not for "lifting" sanctions, it was reminding Washington that the web of sanctions the US had spun gives the UN Security Council control over all of Iraq's future oil revenues. This is also Russia's position.

As long as sanctions officially remain in place, the revenue from all Iraqi oil sold will continue to be deposited into UN accounts. Billions of dollars are at stake in future contracts. The countries on the Security Council that had joined the US in imposing sanctions are not so anxious to turn over these accumulated funds, the bidding on all reconstruction contracts and the future oil revenues to the conquerors.

Part of the reason why Washington does not want the United Nations involved in any way in Iraq is that the Bush administration does not want any other financial claims on its unilateral theft. Until it is clear who has legal title to Iraq's oil, it will be difficult for the US to sell the oil on the world market. Before the 1991 war, Iraqi oil revenue was worth more than US\$20 billion a year.

When the Pentagon started bombing in January 1991, it chose its targets to sharpen the deadly impact of the sanctions. The US consciously destroyed the water, sanitation, sewage and pumping facilities, along with food-processing plants, pharmaceutical plants and medical facilities. At the end of the massive US 40-day bombing campaign, Iraq withdrew from Kuwait. This should have ended the reason for the UN sanctions. But as a condition of the ceasefire, the US demanded that sanctions remain until the UN Security Council had confirmed that Iraq had destroyed any unconventional weapons it may have obtained.

This became the excuse for a protracted struggle to demand the right to send thousands of inspectors into Iraq to confirm that Iraq had no such weapons. Despite over 9,000 inspections, the continuing threat of US veto has kept these starvation sanctions in place for 13 years. By 1995, a UN Food and Agriculture Organization report confirmed that 567,000 children under the age of five had died as a direct result of the continued UN sanctions. A growing global mobilisation demanding that sanctions be lifted created a radical shift in world public opinion.

As world outrage mounted, the US shifted its public relations approach. In an attempt to give a humanitarian cover to its brutal policy, it pushed through the Oil for Food Program. This program allowed Iraq to sell a limited amount of its oil and buy food and medicine from the revenue. The UN Security Council, under a special committee called the 661 Committee, would control all the revenue and review every contract for supplies that Iraq would receive. Some 34 per cent of the Iraqi Oil for Food revenue went to the Kuwaiti monarchy and other "victims" of the 1991 war. ExxonMobil received \$200 million in "war reparations" from the Oil For Food funds, which were supposed to feed starving Iraqi children. Billions of dollars also went to the UN to administer this program. A multibillion-dollar bureaucracy was created that guaranteed lucrative contracts to many countries.

For the past six years, the US and UK representatives on the 661 Committee have denied, delayed or obstructed most of the contracts submitted by Iraq. Under US pressure, the committee denied over 90 per cent of Iraq's contracts for the repair of water/sewage treatment and irrigation projects.

Because of this continual obstruction, billions of dollars from oil sales were never released for Iraq's desperate needs but continued to be held in UN accounts. These funds, along with future oil revenue, are what US corporate power wants undisputed control over.

(Source: by Sara Flounders, *Workers World, May 8, 2003, <http://www.workers.org>*)

THE SCOURGE OF DEPLETED URANIUM

Depleted uranium munitions cause environmental contamination and adverse health effects, but US officials are in denial, refusing to implement clean-up protocols or provide appropriate medical care to victims.

by Doug Rokke, PhD © 2001

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Dr Doug Rokke presented this paper at the UNESCO Conference on "The Child: A Victim of War and A Messenger of Peace", held on May 24–25, 2001, in Athens, Greece.

ABSTRACT

Depleted uranium (DU) munitions have been used in combat because they are extremely effective. However, in winning these battles we have contaminated air, water and soil. Consequently children, women and men have inhaled, ingested or had wounds contaminated with uranium. Uranium is a heavy metal and radioactive poison.

In this paper, Dr Rokke—the health physicist originally tasked by the United States Army to clean up the DU mess—will discuss: What is depleted uranium? How is DU used by the military? Where and when has DU been used? What did we find immediately after Operation *Desert Storm* (ODS) friendly-fire and combat incidents? How did the Depleted Uranium Project get started and what were its objectives? What adverse health effects have been observed, recognised, treated and documented? Based on all previous research and the Depleted Uranium Project, what were the recommendations? What has occurred? What should happen next?

In summary: medical care must be provided to all DU casualties; environmental remediation must be completed; and DU munitions must be banned.

Official denials about DU's serious health effects

Medical evidence—and especially the birth defects in children born to parents in areas with DU contamination—is an issue of growing concern. Depleted uranium (uranium-238) as well as other contaminants of war have been implicated. Today, 10 years after the Gulf War, warriors and non-combatants are exhibiting serious adverse health effects from exposure to depleted uranium munitions contamination, Iraq's chemical and biological weapons and released industrial chemicals. While health effects are linked to complex exposures, I would like to focus on depleted uranium or DU.

Today, United States, British, Canadian and NATO officials continue to state specifically that there are no known adverse health effects in those of us in the US Department of Veterans Affairs Depleted Uranium medical project. That is a lie, as has been proven by our own medical records based on diagnosis of medical problems completed by our personal primary care physicians.

A press report from January 10, 2001, reported that "Defense Secretary William Cohen stated that DU was no more dangerous than leaded paint", and a US Army briefer assured reporters that it was "safe enough to eat". I do not know of any physician who would insinuate that either lead paint or uranium is safe to eat. The children of the world have been poisoned by lead and now by depleted uranium.

While government officials continue to deny any relationship between uranium exposures and adverse health effects, uranium miners and casualties of war who were exposed to uranium contamination are exhibiting the same adverse health effects. Although the *Radiation Exposure and Compensation Act of 1990* was supposed to provide compensation payments to these Americans, a report on the front page of the *New York Times* of March 27, 2001, described how these individuals were sick and waiting for payments because of inadequate budgetary allocations.

I find it very disturbing that while one portion of the US government recognises the serious adverse health effects of uranium exposure, US Department of Defense officials

refuse to recognise the same health effects from exposures caused by wartime use of uranium munitions.

Officials of the World Health Organization released their anticipated report during April 2001. While this report made specific recommendations, the authors of this report, just as with other governmental agencies' reports, did not consult with those of us who actually cleaned up the DU mess following ODS and completed the research as part of the Depleted Uranium Project.

I also find it astonishing that once more the authors of a report have ignored the facts that although medical care for all exposed individuals has been required since the war and environmental remediation has also been recommended or required, neither has been completed. The authors of the WHO DU report also did not contact any of us who are confirmed DU casualties, nor did they speak to our physicians about observed and diagnosed health effects of DU exposures. Once more, the Los Alamos memorandum (March 1991) directives written by LTC M. Ziehm, USMC, are fulfilled.

What is depleted uranium?

Depleted uranium, which is 99.8% by mass U-238, is made from uranium hexafluoride, the byproduct of the uranium enrichment process.

Recent documents released by the US Department of Energy state that a small proportion of other toxic heavy metals such as plutonium is also present. Although 60% of the ionising radiation given off by gamma emissions from U-235 and U-234 is eliminated during the enrichment process, alpha particles at 4.2 MeV and 4.15 MeV—which cause significant internal ionisation with consequent cellular damage—are proportionally increased.

The continuing incomplete statement that DU is 60% less radioactive than natural uranium simply ignores the serious internal damage caused by alpha emissions. In addition, daughter products emit beta particles and gamma rays that may cause further radiological damage.

While DU may not be an external hazard, it is a very serious internal hazard. Consequent inhalation, ingestion and wound contamination pose significant and unacceptable risks. Also, spent penetrators or fragments emit beta particles at 300 mrem/hour and thus cannot be touched or picked up without protection being worn.

How is DU used by the military?

DU is used to manufacture kinetic energy penetrators—giant pencils or rods. Each kinetic penetrator consists almost entirely of uranium-238.

The United States munitions industry produces the following DU munitions with the corresponding mass of uranium-238:

- 7.62 mm with unspecified mass;
- 50 cal. with unspecified mass;
- 20 mm with a mass of approximately 180 grams;
- 25 mm with a mass of approximately 200 grams;
- 30 mm with a mass of approximately 280 grams;
- 105 mm with a mass of approximately 3,500 grams;

- 120 mm with a mass of approximately 4,500 grams;
- Submunitions/landmines such as the PDM and ADAM, whose structural body contains a small proportion of DU.

Many other countries now produce or have acquired DU munitions. DU is also used as armour, counterweights, radiation shielding and, as proposed by the US Department of Energy, as a component of road and structural materials. All of these uses are designed to reduce the huge US Department of Energy stockpiles left over from the uranium enrichment process.

It is important to realise that *DU penetrators are solid uranium-238. They are not tipped or coated!* During an impact, at least 40% of the penetrator forms uranium oxides or fragments which are left on the terrain, within or on impacted equipment or within impacted structures. The remainder of the penetrator retains its initial shape. Thus we are left with a solid piece of uranium lying someplace, which can be picked up by *children*. DU also ignites in the air during flight and upon impact. The resulting shower of burning DU and DU fragments causes secondary explosions, fires, injury and death.

To put it simply, who would want thousands of solid uranium pencils of masses between 180 and 4,500 grams lying in your backyard? Who would want any uranium contamination of any type lying in your backyard?

Where and when has DU been used?

Photographic evidence of destroyed equipment and reports suggest that DU was used for the first time during the 1973 Arab-Israeli War. Physicians using medical laboratory tests have verified an internalised DU exposure in the individual who inspected that

destroyed equipment.

The Persian Gulf War saw the first significant use of DU in combat. Pilots flying aircraft fired at least 850,950 rounds and tank gunners fired another 9,640 rounds, for a total weight of 631,055 pounds or over 315 tons. Recent conversations with the individual who managed all DU rounds suggest that this figure may be too low and that the actual quantity should be 25% greater or about 390 tons.

Although warnings were issued to refrain from DU use, the US Marines fired DU munitions on three separate occasions during 1995 and 1996 while conducting operations in Okinawa, and then did not tell the Japanese government for over one year.

During 1995, the US military also fired at least 10,000 rounds of DU munitions in Serbia. Recently [1999–2000], US forces fired at least 31,000 rounds of 30-millimetre DU munitions into Kosovo or Serbia.

DU munitions have been fired on ranges in Indiana, Nevada, New Mexico, Florida, Maryland, Scotland and Canada. Astonishingly, the US Navy fired DU on Vieques, Puerto Rico, to prepare for the Kosovo attacks.

Vieques is currently a national and international issue, with confirmed environmental contamination and documented adverse health effects similar to those observed in other DU casualties. Recently, Secretary of Defense Donald Rumsfeld decided to

"The authors of the WHO DU report also did not contact any of us who are confirmed DU casualties, nor did they speak to our physicians about observed and diagnosed health effects of DU exposures."

suspend Vieques operations. However, Secretary Rumsfeld must order complete environmental remediation and medical care for all affected children and others on Vieques. All military operations must be stopped forever.

What did we find immediately after Operation Desert Storm friendly-fire and combat incidents?

I was assigned to the ODS DU assessment team as the health physicist and medic by Headquarters, Department of the Army, in Washington, DC. What we found can be explained in three words: "Oh my God!" According to official documents, each uranium penetrator rod could lose up to 70% of its mass on impact, creating fixed and loose contamination, with the remaining rod passing through the equipment or structure to land and lie on the terrain. On-site impact investigations showed that the mass loss is about 40%, which forms fixed and loose contamination, leaving about 60% of the initial mass of the penetrator in the solid pencil form. We found that standard radiacs [radioactive detection, identification and computation sets] will not detect this contamination. Equipment contamination included uranium fragments, uranium oxides, other hazardous materials, unstable unexploded ordnance and byproducts of exploded ordnance.

US Army Materiel Command documents sent to us during ODS stated that the uranium oxide was 57% insoluble and 43% soluble and at least 50% could be inhaled. In most cases, except for penetrator fragments, contamination was found inside destroyed equipment or structures, on the destroyed equipment or within 25 metres of the equipment. However, during the 1994 and 1995 Nevada tests, we found DU contamination out to 400 metres from a single incident.

After we returned to the United States, we wrote the Theater Clean-up Plan which reportedly was passed through the US Department of Defense to the Department of State and consequently to the Emirate of Kuwait. Today, it is obvious that none of this information regarding clean-up of extensive DU contamination was ever given to the Iraqis. Consequently, although we knew there were and still are substantial hazards existing within Iraq, these have been ignored by the United States and Great Britain for political and economic reasons.

Iraqi, Kosovar, Serbian and other representatives have asked numerous times for DU contamination management and medical care procedures, but this information has not been provided. Residents of Vieques, who are US citizens, also have asked for medical care and completion of environmental remediation, but DOD officials still refuse to complete these essential actions.

How did the Depleted Uranium Project get started, and what were its objectives?

The probable health and environmental hazards of uranium contamination were known before the Gulf War. A United States Defense Nuclear Agency memorandum, written by LTC Lyle, that was sent to our team in Saudi Arabia, stated:

"As Explosive Ordnance Disposal (EOD), ground combat units, and civil populations of Saudi Arabia, Kuwait, and Iraq come increasingly into contact with DU ordnance, we must prepare to deal with potential problems. Toxic war souvenirs, political furor, and post-conflict clean-up (host nation

agreement) are only some of the issues that must be addressed. Alpha particles (uranium oxide dust) from expended rounds is a health concern, but beta particles from fragments and intact rounds is a serious health threat, with possible exposure rates of 200 millirads per hour on contact."

This memorandum, the reports that we prepared immediately after the Gulf War as part of the DU assessment project to recover DU-destroyed/contaminated US equipment, the previous research and other expressed concerns led to the publication of a United States Department of Defense directive signed by General Eric Shinseki on August 19, 1993, to:

1. Provide adequate training for personnel who may come in contact with depleted uranium equipment.
2. Complete medical testing of personnel exposed to DU contamination during the Persian Gulf War.
3. Develop a plan for DU-contaminated equipment recovery during future operations."

It is important to realise that DU penetrators are solid uranium-238. They are not tipped or coated!

It is thus indisputable that United States Department of Defense officials were and are still aware of the unique and unacceptable hazards associated with using depleted uranium munitions.

Consequently, I was recalled to active duty in the US Army as the DU Project Director and tasked with developing training and environmental management procedures. The project included: a literature review; an extensive curriculum development project

involving representatives from all branches of the US Department of Defense and representatives from England, Canada, Germany and Australia; and basic research at the Nevada Test Site located 120 miles northwest of Las Vegas, Nevada, to validate management procedures. The products of the DU Project included:

- Three training curricula: (1) Tier I: General Audience, (2) Tier II: Battle Damage and Recovery Operations, (3) Tier III: Chemical Officer/NCO;
- Three videotapes: (1) "Depleted Uranium Hazard Awareness", (2) "Contaminated and Damaged Equipment Management", and (3) "Operation of the AN/PDR-77 Radiac Set";
- The US Army Draft Regulation, "Management of Equipment Contaminated with Depleted Uranium or Radioactive Commodities";
- A United States Army pamphlet specifying "Handling Procedures for Equipment Contaminated with Depleted Uranium or Radioactive Commodities";
- A redesigned radiac capable of finding and quantifying DU contamination.

Although these products were completed, approved and ready for distribution by January 1996, the US Army, US Department of Defense, British, German, Canadian and Australian officials have disregarded repeated directives and have not implemented, or have only implemented portions of, the training or management procedures. The training curriculum and management procedures have not been given to all individuals and representatives of governments whose populations and environment have been exposed to DU contamination, as verified by US General Accounting Office investigators in a report published in March 2000 and through personal conversations.

What adverse health effects have been observed, recognised, treated and documented?

Deliberate denial or delay of medical screening and consequent medical care of US friendly-fire casualties who inhaled, ingested and had wound contamination from DU, and of all others with verified or suspected internalised uranium exposure, limits recognition and verification of health effects.

Although during March 1991 and many times since then we recommended immediate medical care, the United States Department of Defense, the British Ministry of Defence and consequently the United States Department of Veterans Affairs are still reluctant to provide thorough medical screening and necessary medical care.

Dr Bernard Rostker wrote to me in a letter dated March 1, 1999, that physicians and health physicists at the completion of the ground war decided that medical screening and care for uranium exposures was not required. Actual documents refute this!

Today, individuals (including myself) are sick and others are dead—people who were denied medical care, even though I requested it in a letter dated May 21, 1997, which was sent to the Office of Surgeon, US Army Materiel Command, and forwarded to Dr Rostker.

Verified adverse health effects from personal experience, from physicians, and from personal reports from individuals with known DU exposures include: (a) reactive airway disease; (b) neurological abnormalities; (c) kidney stones and chronic kidney pain; (d) rashes; (e) vision degradation and night vision losses; (f) gum tissue problems; (g) lymphoma; (h) various forms of skin and organ cancer; (i) neuro-psychological disorders; (j) uranium in semen; (k) sexual dysfunction; and (l) birth defects in offspring.

Today, health effects have been documented in uranium processing facility employees and residents living near: Paducah, Kentucky; Portsmouth, Ohio; Los Alamos, New Mexico; Oak Ridge, Tennessee; and Hanford, Washington. Employees at uranium manufacturing or processing facilities in New York, Tennessee, Iowa, Massachusetts and the four corners area of southwest Colorado also have repeatedly reported health effects similar to those reported by verified Gulf War DU casualties. Iraqi and other humanitarian agency physicians are reporting the same health effects in exposed populations.

Scottish scientists recently verified that residents of the Balkans were excreting uranium in their urine. This suggests that depleted uranium (U-238) is mobile and is contaminating air, water and soil—just as specified in an October 1943 letter to General Leslie Groves.

Today, verifying the correlation between uranium exposures and adverse health effects may not be possible, except in only a few cases, because of deliberate delays in required screening—a radio-bioassay. Screening involves the collection and analysis of urine, faecal and throat samples within 24 hours of exposure. Today, months or years after exposure, only a small fraction of the sequestered uranium will be detected. That is why WHO scientists recommended immediate testing of exposed populations. This detectable fraction represents only the mobile or soluble portion. A recent autopsy in Canada has revealed that sequestering is

occurring and that the mobile fraction may not be representative of what is actually present.

Even when verified medical evidence attributing adverse health effects to DU exposures is available, official recognition and documentation is limited. For example, during 1994 and 1995, United States Department of Defense medical personnel at a US Army installation hospital removed, separated and hid documented diagnoses (including my own) from affected individuals and other physicians. Some medical records were retrieved during the fall of 1997, but probably too late for many individuals. Today this practice continues and, consequently, exposed individuals are not receiving adequate and effective medical care. This includes individuals whose required medical care has been requested and ordered many times. This will continue as long as the United States, British, Canadian and other governments and NATO are permitted to ignore the emerging evidence and deny medical care to *all* individuals who have been or may have been exposed to

depleted uranium (uranium-238), other isotopes and other contaminants created as a result of depleted uranium munitions use.

The criteria describing exposures requiring medical screening within 24 hours of exposure and consequent medical care were specified in a message from Headquarters, Department of the Army, dated October 14, 1993. These exposures included:

- "a. Being in the midst of smoke from DU fires resulting from the burning of vehicles uploaded with DU munitions or depots in which DU munitions are being stored.
- b. Working within environments containing DU dust or residues from DU fires.
- c. Being within a structure or vehicle while it is struck by DU munitions."

These guidelines must be applicable with care to all exposed individuals, independent of military or civilian status. They must be implemented *now*!

Medical care must be planned and completed to identify and then alleviate actual physiological problems, rather

than the emphasis being placed on psychological manifestations and continued testing. Children and others are sick and deserve care for the complex exposures that have resulted in health problems. Medical care for known uranium exposures should emphasise (concern in parentheses):

- a. neurology (heavy metal effects);
- b. ophthalmology (radiation and heavy metal effects);
- c. urology (heavy metal effects and crystal formation);
- d. dermatology (heavy metal effects);
- e. cardiology (radiation and heavy metal effects);
- f. pulmonary (radiation, particulate and heavy metal effects);
- g. immunology (radiation and heavy metal effects);
- h. oncology (radiation and heavy metal effects);
- i. gynaecology (radiation, neurological and heavy metal effects);
- j. gastrointestinal (systematic effects);
- k. dental (heavy metal effects);

Even when verified medical evidence attributing adverse health effects to DU exposures is available, official recognition and documentation is limited.

Continued on page 74

HAARP'S THREAT TO THE "VOICE OF THE PLANET"

*The subtle
electromagnetic
interactions
between the Earth's
biosystems and the
ionosphere are
under threat from
HAARP, a weapon
of mass destruction
that's part of the US
military's "Joint
Vision 2020" plan.*

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Introduction: SR Frequencies and Biocommunication

Schumann's resonance (SR) may be the substrate for a radar-type extrasensory perception (ESP) mechanism common to all living beings. Non-specific frequencies can be absorbed and re-radiated in unique interference patterns by all objects encountered. These "sounding waves" can be frequency and pattern modulated by conscious intent in order to yield specific information (interference patterns).

Decoded by the brain, they return almost instantly on the "back" of the Schumann's resonance and are then translated by the brain into conscious data. Also, bioinformation can be remotely imprinted intentionally on a target through a primitive, radar-type sensory interface with an SR carrier wave. All these and more mechanisms depend on the SR frequencies staying within their median range.

Electrical engineer Ben Lonetree (<http://sidereal7.org>) conducts extensive monitoring of SR frequencies, which he calls the "Voice of the Planet", and Earth's electromagnetic fields in Sedona, Arizona. His site provides both atmospheric and geophysical real-time readings with high reliability. Lonetree also has a strong background in MRI scan technology and brainwave training. His speciality is low-amplitude ELF and ULF readings.

RHYTHM AND CHAOS IN THE IONOSPHERE

The rhythm of life has evolved at an even tempo for epochs. We live in a complex matrix of oscillating fields; the tiniest fluctuations in one interlocked field carry over perturbations into others. Many times per second, pulses travel completely around the world between our planet's surface and the ionosphere, sending coordinating signals to all organisms. These signals couple us to the global electrostatic field. Named for their discoverer, the Schumann's resonance (SR) provides an orchestrating pulse for life on our planet. This standing wave is continually recharged, like the ringing of a bell, by lightning.

We all march to the cadence of this cosmic drummer—our planetary heartbeat, which sets the tempo for health and well-being. Damaging this planetary pacemaker could spell doom for life as we know it. In the name of progress and defence, this pacemaker is now threatened, while vast amounts of public money are spent on this atmospheric exploitation. Even more tax funds are allocated to implement the ill-conceived "Star Wars" missile defence system by the year 2020 and the already-operational energy beam project HAARP (High-frequency Active Auroral Research Program), operating in Gakona, Alaska.

This environmental rhythm—the fundamental driving system for all life on our small blue planet—is jeopardised by human manipulations of the ionosphere, such as HAARP. Some physicists have gone so far as to identify the upper atmosphere as essentially "alive", transmitting a type of consciousness to all living things. It is dangerous to fool with Mother Nature, as the results of ozone depletion and other ecological calamities have shown. Tampering could destroy this system, essentially leaving it—and us—dead. It might be easy to see that such survival risks don't balance alleged benefits, but targeted research on potential problem areas has been virtually non-existent.

What is clear is that part of the money voted to Bush's Star Wars plan would be used for research into space-based lasers... What the Russians are worried about...are US plans to begin large-scale scientific experiments using the Alaska-based HAARP in 2003. Ninety Russian deputies signed the appeal against the HAARP program, charging that the experiments would create weapons capable of breaking radio communication lines and equipment installed on spaceships and rockets, provoke serious accidents in electricity networks and in oil and gas pipelines and have a negative impact on the mental health of people populating entire regions. (Fitraakis, 2002)

The ionosphere shields us from deadly radiation from the Sun and deep space. Holes are now being routinely punched in this insulating blanket by high-frequency radio waves, and

may accidentally tear open the fragile cocoon of human and planetary evolution. Dire consequences could be as devastating as the failure of an individual's pacemaker. The forces of chaos could be let loose, doing irreversible damage.

The Strategic Defense Initiative (SDI) puts this technology for environmental modification in the hands of the military command—a frightening prospect. Because of national security mandates, we can't be sure just what they are doing with it, and conjecture is running rampant. Hopefully, it can be disclosed before it is too late for all of us.

PERTURBATIONS AFFECTING EARTH'S CLIMATE

To comprehend just how delicately balanced our fragile planet is, we need to consider the astrophysics converging on our region of space. We have to look into deep time and space. Then it becomes easier to see how the slightest perturbations to our atmosphere can cause dramatic rifts in the course of our geophysical destiny.

Many complex forces are already impacting the Earth, particularly our global weather patterns. Looking at the broadest scale, there is a galactic ice age threat from supernovas, whose cosmic rays create clouds when they hit our atmosphere, cooling it. Also, the solar system is passing through the densest portion of the Milky Way Galaxy, a roughly 30-million-year cycle.

This dense molecular cloud and fluctuating galactic tidal forces of distant matter can destabilise comets in the Oort cloud and send them hurtling toward the planets and Sun. This rain of small comets, called "impact surges", is influential in the pulsing and advancing of ice sheets over millennia and implicated in mass extinctions. It affects the oceanic heat pump (with a rain of fresh water) that acts as a global ocean conveyor.

This salt pump moves warm water into northern climes, like the US eastern seaboard and Europe, keeping them habitable while cooling the tropics. Its collapse would mean that warm, salty Gulf Stream water would no longer move north, thus facilitating another Ice Age.

The motor of evolution is not natural selection, but climate and ice. Ice sheets have pulsed 30 times in the last 2.5 million years since the isthmus of Panama formed, blocking tropical circulation between the Pacific and Atlantic oceans. This diverted warm water north, where it began falling as snow and became built into glaciers. These glaciers ebb and flow depending on the wobble of the Earth.

Dryness created by these glacial cycles forced the African tropical rainforests to die back, creating savannahs, and our progenitors left the forest and modern humans, reliant on intelligence for survival, emerged. Intelligence and versatility became our hallmarks because we had to learn to survive in volatile climates. Only about 1,000 generations have passed since the Ice Age in Europe, when human population was incredibly low due to climatic stress.

All research indicates Earth's climate system has sensitive thresholds, which when crossed will push the system from one stable operating mode into another. Oceanic systems control weather on land, as El Niño has shown. It is also revealed in deep-sea sediments, ice-core sheets and the fossil record. They all show the conveyor has shut down in the past. It has been called the "Achilles heel" of our climatic system. The pump is in decline, according to researchers, and could signal an abrupt and dramatic shift. A paper

in *Nature* in 2002 showed that the deep current is freshening by as much as 20%; this is *not* a good sign. Melting and calving glaciers could hasten the process.

Fossil evidence demonstrates collapse can happen within a decade and persist for centuries. This new paradigm of rapid climate change is now broadly accepted worldwide. Such triggers can create spikes of around 10°C in about a decade, followed by plateaus of about 20 years, then dramatic cooling of around 20°C in around two decades.

In the last 8,000 to 10,000 years, these pulsations have been milder, but solar instability, axis tilt and current declines could precipitate their return. So could human tampering with the weather through energy beam technology and weaponry.

A rise in temperature of only 3–4°C could trigger a rise in sea level of 20 metres within one decade! Further warming and ice-melt creates a cycle where temperatures could spike 8–10°C in 30 years. Then ocean currents would shift and new heat/cold patterns

emerge. New shallow seas would decrease land mass; agricultural plains would be flooded, diminishing food-growing areas further. Approximately 30–40% of the land would be lost and mankind would be displaced from inundated valleys on all continents. Trade, commerce and industrial production would be flooded out. In 2003, the US EPA predicted a rise of 3–9°F over the next hundred years. Tropical oceans have warmed 1.8–2.6°F over the past 100 years, and glaciers are melting in many locations worldwide.

Research has also suggested that the Sun itself has been in a heating cycle and may be a significant component in global warming (1°F per year since 1880). Limited results suggested the Sun produced 0.05% more radiation per decade since the late 1970s. The Sun's alleged increasing output means stronger solar winds sweeping across the Earth's upper atmosphere, exciting and ionising it with charged particles.

Roughly half the global warming in the last century can be attributed to the Sun. The hotter it burns, the more cosmic rays it deflects. Sustained over decades, it could lead to dramatic climate fluctuation—as has happened in the historical past with events such as the Little Ice Age between the 13th cen-

tury and the most frigid 17th century.

The output of the Sun fluctuates in an 11-year cycle, which had two peaks in 2000 and 2002. Solar minimum is about three years away (the solar minimum time period doesn't necessarily equal the solar maximum period). These changes in the solar cycle cause short-term changes on Earth. At solar maximum, an increase in cloud cover by as much as 2% over the USA was reported. When bombarded with maximum solar output, the temperature of the thin upper atmosphere doubles. It swells and puffs up further into space, up to and beyond the orbit of the International Space Station. It can even increase drag on the station, necessitating frequent boosts from space shuttles to maintain momentum.

Recently it has become easier and more accurate to measure solar activity outside of the Earth's atmosphere. We now measure total solar energy at all wavelengths, with the resultant measurement called Total Solar Irradiance (TSI). The jury is out on whether current indications of increases are a long-term trend or a brief aberration.

In a recent study, data was analysed from six satellites orbiting Earth at different times over the 24 years. Richard Willson, a

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researcher from Columbia University who is affiliated with the National Academy of Sciences and the Goddard Institute for Space Studies, ferreted out errors in one of the datasets that had prevented previous studies from discovering the trend.

The new study shows that the TSI has increased by about 0.1 per cent over 24 years. That is not enough to cause notable climate change, Willson and his colleagues say, unless the rate of change was maintained for a century or more. On time scales as short as several days, the TSI can vary by 0.2 percent due to the number and size of sunspots crossing the face of the Sun. (Britt, 2003)

However, that shift, said to be insignificant to weather, is equal to the total amount of energy used by humans globally for a year, the researchers estimate.

INTERFERING WITH THE IONOSPHERE

Further perturbing, much less tearing holes in a super-heated ionosphere, can create catastrophic weather changes. These can potentially be triggered by the military under the Strategic Defense Initiative (SDI) to destabilise whole areas with climatic manipulation without the risks of conventional warfare. Deploying this weaponry for economic and strategic purposes could collapse ecological systems and disrupt agricultural production dramatically. The Department of Defense has, of course, already implemented the development of intelligence and weather monitoring systems related to this program.

Latest speculation has also tried to link appearance of mysterious "chemtrails" to the deployment of HAARP technology. Some think that the reflective qualities of these clouds influence atmospheric heating and weather patterns. Reported analyses of the "angel-hair" taken from the atmosphere after a day of spraying claim the presence of a variety of toxins. Viral bacteria, toxic moulds, carbon black and EDBM (ethylene di-bromide) have been identified. Speculation about these sprayed grids includes increasing reflectivity in certain layers of the atmosphere. These sprayings are also responsible for a massive decrease in the production of negative ions by the forests. This is eventually deadly for all biological life.

Further, explanation of the serious and widespread drought conditions are directly related to the fact that the highly toxic and moisture-absorbing (up to seven times its own weight) barium salt has also been detected in high quantities in the atmosphere right after a spraying event. These sprayings may therefore be linked to HAARP and its "weather engineering" capabilities.

ARCO Petroleum owns the patents on this Tesla technology. It appears that ARCO was directly funding HAARP, as reported a number of years ago. Many research groups have shown that we are being constantly showered with ELF's (extremely low frequencies) as electronic "smog". ELF's can be deadly to any biological life-form as they alter the normal frequency of that life-form, causing serious illness including irrational thought, inability to concentrate, chronic fatigue and/or death.

Interfering with this delicately balanced dynamic system could induce a catastrophic collapse, much like an avalanche. Therefore, the potentials from so-called "ionospheric heaters" are truly frightening. We have no idea what possibilities can emerge from long-term meddling with the sensitive balance of the ionosphere and global temperature, which is also linked to the worldwide oceanic pumping system whose source lies off Greenland.

As if the weather isn't disrupted enough from other human pollution, tampering with beam energy devices compounds the problem

much further. The United Nations is sponsoring continued debates on climate change, greenhouse gases, and "non-lethal weapons" which can be deployed by at least the Americans and Russians. "Weather war" means triggering atmospheric disturbances with ELF radar waves. Through electronic weaponry, the US wants to "own the weather" and the space platform for military superiority, tailoring natural patterns and dominating global communications.

Recent scientific evidence suggests that HAARP is fully operational and has the ability of potentially triggering floods, droughts, hurricanes and earthquakes. From a military standpoint, HAARP is a weapon of mass destruction. Potentially, it constitutes an instrument of conquest capable of selectively destabilising agricultural and ecological systems of entire regions. While there is no evidence that this deadly technology has been used, surely the United Nations should be addressing the issue of "environmental warfare" alongside the debate on the climatic impacts of greenhouse gases...

...Dr Rosalie Bertell confirms that "US military scientists...are working on weather systems as a potential weapon. The methods include the enhancing of storms and the diverting of vapor rivers in the Earth's atmosphere to produce targeted droughts or floods..."

Marc Filterman, a former French military officer, outlines several types of "unconventional weapons" using radio frequencies. He refers to "weather war", indicating that the US and the Soviet Union had already "mastered the know-how needed to unleash sudden climate changes (hurricanes, drought) in the early 1980s". (Chossudovsky, 2000)

There are smaller systems at Arecibo, Puerto Rico, at Fairbanks, Alaska, in Tromsø, Norway, and in the cities of Moscow, Nizhny Novgorod and Apatity, Russia, as

well as in Kharkov, Ukraine, and Dushanbe, Tadjikistan, and possibly in Israel (at an unknown location).

HAARP has been presented to public opinion as a program of scientific and academic research. US military documents seem to suggest, however, that HAARP's main objective is to "exploit the ionosphere for Department of Defense purposes". Without explicitly referring to the HAARP program, a US Air Force study points to the use of "induced ionospheric modifications" as a means of altering weather patterns as well as disrupting enemy communications and radar. (Chossudovsky, 2000)

HAARP AND "JOINT VISION 2020"

International concerns over HAARP and sister projects deploying similar energy beams have continued unabated for over a decade. The most recent developments and proposals are not encouraging. Both the foreign press and Western allies of the US have denounced a "Joint Vision 2020" plan for missile defence and space-based lasers as a highly dangerous move towards world domination.

Earlier this year, US Representative Dennis Kucinich told *Columbus Alive* that Joint Vision 2020 is already an ongoing military program to experiment with directed energy. On November 9, 2002, Carol R. Schuster, Director for Defense Capabilities and Management at the General Accounting Office (GAO), briefed the Democratic minority members of the House Armed Services Committee on Joint Vision 2020. Schuster explained that "Joint Vision 2020 also emphasizes the importance of experimentation to identify innovations in war fighting".

A task force of DoD, US Joint Forces Command, and the Joint Chiefs of Staff continues to investigate and implement means of

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deploying electronic weaponry capable of destroying any global opposition by 2020. Schuster confirmed Kucinich's comments:

In 1998, the US Joint Forces Command began to implement a joint experimentation program to test new war-fighting concepts that now support Joint Vision 2020.

HAARP is jointly administered by the US Navy and Air Force and is a central part of the Joint Vision 2020 strategy. A February 1990 HAARP Joint Service program plan drafted by the Air Force's Geophysical Laboratory and the Navy's Office of Naval Research documents the plan's military applications. The document indicates that, among other things, HAARP will be used for generating extremely low frequency waves for submerged submarine communication and possible weather warfare applications, and for attempts to take advantage of natural ionospheric processes by directing energy through the ionosphere and back to Earth.

HAARP MOON-BOUNCING EXPERIMENTS

The Russians and some European allies are worried that the US military's experiments focusing large amounts of high-frequency energy for military purposes could theoretically trigger earthquakes. In April 1992, Defense News reported that the US deployed an electromagnetic pulse weapon during Operation Desert Storm (Fitakis, 2002)

Researcher Guy Cramer has suggested the HAARP array may be used to bounce deadly signals off the ionosphere and Moon to target sites on Earth with major explosions, virtually eliminating the need for tactical nuclear weapons. The 3,000,000,000-watt signal, originating in Alaska, can be carried off the Moon to reach virtually anywhere on the planet, on the surface or underground, with heat radiation. Since it does not leave contamination, it can even terminate targets covertly, being passed off as conventional or Special Forces results.

It may also be used to search out underground installations with penetrating topography or ground-penetrating radar, as well as in its conventional deployment as over-the-horizon radar. To neutralise or penetrate a target, the upper atmosphere is heated to make a reflective lens for the signal. Cramer suspects Moon-bounce experiments have been going on since 1998, using a technique ham radio people have employed since the 1950s.

A similar array proposed for installation in central Australia could target positions unreachable by Alaska's HAARP, with both high and low frequencies.

In late 1998 and early 1999 the ELFRAD Group monitored a daily frequency from .9 to .95 hertz (pulses per second); the wavelength of this frequency was approximately 319,877 km or 198,711 miles. The Moon's distance is fairly close to the wavelength. The signal appears to be a controlled signal transmitted from an unknown source at approximately the same time daily except week-ends. The signal is strong enough to generate its third harmonic, which is 2.81235 Hz...

An Ultra Low Frequency signal in late 1998 through early 1999 from an unknown source which occurs only on week days, powerful enough to create a third harmonic wave, with a quick rise/slow decay which tracks better with magnetometers in the North and a wavelength approximately matching the distance to the Moon? The answer seems apparent: HAARP or a similar array in the North is bouncing signals off the Moon, back to the Earth. (Cramer, 2001)

VOICE OF THE PLANET: SR AND THE MIND/BODY

SR frequencies are related mathematically but are not true harmonics. Perhaps it is more apt to think of SR as the "Voice of the

Planet", rather than its heartbeat—which is around the 10 Hz cycle (Lonetree). There is an harmonic relationship between the Earth and our mind/body. Earth's low frequency isoelectric field, the magnetic field of the Earth and the electrostatic field that emerges from our bodies are closely interwoven. Our internal rhythms interact with external rhythms, affecting our balance, REM patterns, health and mental focus. SR waves probably help regulate our body's internal clock, affecting sleep/dream patterns, arousal patterns and hormonal secretion.

The rhythms and pulsations of the human brain mirror those of the resonant properties of the terrestrial cavity, which functions as a wave guide. This natural frequency pulsation is not a fixed number but an average of global readings, much like EEG is an average of brain-wave readings. SR actually fluctuates like brain-waves, due to geographical location, lightning, solar flares, atmospheric ionisation and daily cycles.

Finnish physicist Matti Pitkanin believes that even interplanetary and interstellar magnetic fields influence conscious life. He has worked out a model correlating psi phenomena with sidereal time, which describes the two-hour interval around 1.30 am (0130 hours) as optimal. He implicates magnetic flux from the galactic core, combined with lowered noise level in the geomagnetic field. As

other research is beginning to reveal, he thinks that microwaves and radiowaves play an influential role in biocontrol, homeostasis and remote mental interactions.

Pitkanin suggests that in some ways the mind/body functions like a quantum biocomputer, directing the binding of molecular lock-and-key mechanisms. He implicates plasmons as the basis of neural circuitry, and topologically quantised dipolar magnetic fields—whose knotting, linking and twisting may entrain with geomagnetic forces—as creating changes in magnetic polarity.

"Kindling" is a term applied in particular to the entrainment of neurons in the brain. These are ignited in coherent global patterns, producing larger waves across a greater surface of the brain. It becomes obvious that in deep meditation, when waves of alpha and theta rhythms cascade across the entire brain, it is possible for the human being and the planet to come into resonance.

There is a transfer of energy and information, which is *embedded in a field* rather than being a field. Perhaps the planet communicates with us in this primal language of frequencies. This may explain why trance and healing seem to occur in the primary SR frequency associated with alpha rhythms.

Ample anthropological evidence shows that humans have intuitively synchronised with the planetary resonance throughout human history and back into the mists of time. There is cross-cultural evidence demonstrating a variety of ritualistic practices that enhance this harmonisation with the planetary field.

Perhaps the most obvious "drivers" of these trance states are shamanic drumming and trance dance, arguably employed for over 50,000 years. Pulsing or flickering light is another driver. A further example comes from the Jewish and Islamic faiths, many of whose adherents bob and sway while praying or reading holy books. This trancing phenomenon can be presumed to ingrain texts at a deeper level and create "experiences" to go along with conceptual indoctrination. It may also be linked in some manner to hypnotic gesturing (*mudra*) and speech, and therefore to charismatic or so-called "mana" personalities.

As part of their chronicling of personality formation, Mead and Bateson reported a technique transmitted to Balinese children that this culture intuitively employed to harmonise their communities.

The rhythms and pulsations of the human brain mirror those of the resonant properties of the terrestrial cavity, which functions as a wave guide.

Anyone can do the same thing and may already be doing it unconsciously. If you sit in a chair and move your foot so that it's resting on the ball of the foot and you get it at the right angle, your whole leg will start to vibrate or oscillate. When that oscillation is close to the SR frequencies, it facilitates trance.

Teachers and parents become annoyed with excitable children, constantly telling them, "Sit still!" But, constantly bouncing their legs and moving their arms may be a natural way to energise our bodies. And this may even be the heart and soul of many ceremonial experiences, such as healing. The body begins to move and hands begin to flutter, and, where there is less constraint or inhibition, the whole body can be set in resonant motion reflecting that healing intention. For example, in the Kalahari Bushmen's healing dance, shamans infused with life energy become aroused, hot and begin shaking. When they grab another person and hug them, that person also begins shaking and may turn and grab someone else. One by one, everyone begins literally to vibrate with this pulsing energy. However (like Chinese medicine), by the time it gets to our culture or other contemporary cultures, this phenomenon becomes very constrained and expresses through more subtle practices, such as "therapeutic entrainment" (the empathic rapport of physician or healer and client).

Anyone can intentionally induce this healing/energising frequency, and there is no single "correct" way. It is a very natural capacity our bodies are intuitively capable of effecting: vibrating with the pulse of life itself. The purpose of this movement is to get outside the limitations and constraints of isolated individual mind and connect with something greater.

It has any number of names, but this "greater Mind" links us to one another and to Nature, embodying the metaphysical axiom, "As Above, So Below". This dynamic interconnectedness links mind/body, galaxy/atom and sensation/stimulus in a mind-over-matter loop, where subject and object become one, where galactic and human consciousness are effectively joined.

C. M. Anderson, MD (1998) of Harvard describes a commonly experienced yet little understood phenomenon which he calls the "Persistent Oscillatory Sound" (POS). Many people notice this internally generated "sound", particularly when ill or dehydrated, as it seems to become "louder". It sounds like an insect hum. Anderson links it not just to the REM (rapid eye movement) or dream state and post-traumatic stress disorder (PTSD), but to the normal alpha 10 Hz rhythmicity.

Anderson speaks of the disturbing effect of lights and sounds, which might result from loss of normal global habituation due to RF [reticular formation] destabilization, resulting in fear and/or rage. Again, trauma and drug abuse history is strongly associated with asymmetric hemispheric function. Temporal lobe structures such as the hippocampus and amygdala are particularly sensitive to the effects of child abuse and trauma.

Anderson conjectures the oscillatory sound could indicate rapid shifting or cycling of attentional resources between the left and right hemispheres, downshifting the normally constant 10 Hz rhythmicity of the olivocerebellar system. This oscillatory auditory effect may function as an auditory driver. The downshift effect may indicate possible flooding of the left hemisphere by material from the uninhibited right which takes over primary conscious focus. This sets the stage, along with phasic fluctuations of the S-Net [the network of serotonergic neuron cell body groups] and uninhibited PGO [pons-geniculate-occipital], for the sudden onset of the SOC state [self-organised critical state] and the waking dream period.

Anderson alludes to "waking dreams as a healing journey

through the fractal hyperspace of emotionally indexed childhood memories..."

"The recall of traumatic childhood experiences in adults, due to the immaturity of limbic structures at the time of trauma, may require electrical stimulation or intensive PGO-like activity present during the oneiric [dream] state. Habitual disruption of normal sleep processes by stress associated with combat, bereavement, divorce, child abuse, neglect or chronic drug abuse interferes with the natural restorative function of phasic REM processes." (I. Miller and G. Swinney, 2001)

EM FIELDS, CONSCIOUSNESS AND DNA

Further research on these electromagnetic relationships is essential, perhaps even to our psychophysical survival as a species. They affect our minds, the cellular and genetic structure of our body, our sleep and dream cycles, our emotions, perhaps even our spirit. Monitoring and collating these effects of atmospheric tampering and their potential influence on the ionosphere and SR—and therefore human brain-waves and health—should be continued. We are approaching the end of the current sunspot cycle, and should use an entire 11-year cycle to acquire accurate data results, as Hainsworth suggested (Miller and Miller, 2002–2003).

Various researchers and physicists are pulling together some relevant data under the auspices of the *Journal of Non-Local and Remote Mental Interactions (JNLNMI)* (see website <http://www.emergentmind.org>), edited by physicist Lian Sidorov. A major hypothesis of this group is that EM fields outside the body are crucial for our consciousness. Matti Pitkanen has developed a physics model, called Topological Geometro-dynamics (TGD), highlighting the close relationship of human physiology with SR and other ELF and electromagnetic patterns.

Pitkanen believes that not only global, but also interplanetary and interstellar magnetic fields are of great importance for conscious life. His explanations involve magnetic flux tubes, a dipole-like part of a field. A wide range of EM waves, in particular microwaves and radiowaves, are likely key elements in homeostasis, remote mental interactions between cells and other structures, and sensory representation, as well as in remote mental interactions both within and outside the body. He explains that the noise level of Earth's magnetic field must be low for anomalous cognition (also called "psi" and ESP) to occur. Alan Frey suggested similar field notions decades ago, speaking specifically of microwave-range inputs.

These EM fields are only correlates of consciousness. Still, TGD allows the possibility of assigning to someone's field body a topological field quanta identity. Pitkanen also suggests these fields and waves are influential when biological systems perform quantum computation-like processes. His biophysics suggests that neural circuits and molecules are bound by lock-and-key mechanisms through this process of magnetic circulation (topologically quantised dipolar magnetic fields).

Pitkanen even sees Earth's magnetic field as a quantised dipolar magnetic field interaction of knotting, linking and complex twisting. TGD views the brain and nervous system as a sensory organ for our extended electromagnetic self, which has a length scale at least the size of the Earth's diameter. He suggests further that PSI phenomena and distant healing may involve transfer of specific electromagnetic frequencies through Planck-length wormholes and join-along boundaries postulated by TGD, which would allow for the near-instant transfer of information.

[T]he magnetic sensory canvas (MSC) hypothesis provides a

Anyone can intentionally induce this healing/energising frequency, and there is no single "correct" way.

mechanism for "sharing qualia" associated with distant points on the geomagnetic sphere—essentially a form of cognitive entanglement between operator and target... [O]ne clear advantage of TGD over other models of subtle energy transmission is that the EM fields are not directly carried from sender to target, but are simultaneously generated at the two locations by a vacuum (geometrical) current: hence they remain coherent while bypassing the paradox of non-attenuation with distance...

[T]he illusion of our locality is perpetuated by the data fed to us by our senses—that is, those perceptions we are habituated to pay attention to. (Sidorov, 2002)

Other research suggests the fundamental interaction of internal and external fields is the right track. Joseph Jacobson (2002), at MIT, found a way to switch cells off and on with radiowaves. His team also "unzipped" and manipulated DNA with a radio-frequency pulse. The same approach worked on proteins as well, and proteins orchestrate nearly all cellular chemical processes.

Further, physicist Peter Gariaev has proposed a wave-based genome, whose main information channel is the same for both biophotons and radiowaves (see <http://www.emergentmind.org>).

In 1973, Miller and Webb described DNA as a holographic projector (see "Embryonic Holography", 2002). In other words, genes encode and express themselves via light and radio waves, or acoustical holography (see Miller, Miller and Webb, "Quantum Bioholography", 2002). Delocalised interference patterns create calibration fields (blueprints) for our body's space-time organisation. The system works as a biocomputer—a wave biocomputer. DNA can also function as a gel-like liquid crystal, emitting a weak laser-like light that can be converted into an electro-acoustic signal.

BIOSYSTEMS, SCHUMANN'S RESONANCE AND ESP

In conclusion, Miller & Miller postulate, along with others, that:

1. Complex electrodynamic fields establish the organisation of all biological systems. We are fundamentally electromagnetic, rather than chemical beings. Wave interaction is a key determinant of biological structure and optimal functioning. Biosystems are sensitive to natural and artificial electromagnetic fields. Perturbations in environmental fields can induce changes in organisms informed by those fields. Field frequencies and amplitudes affect our biodynamic state.

2. ELF frequencies of Schumann's resonance are intimately linked with those of human brain-waves. Natural or artificially induced changes in SR could affect subtle and perhaps gross brain-wave generation. In particular, it could lead to changes in patterns and frequencies of resonance and resulting phenomena such as homeostasis, REM, psi and healing.

Robert Beck...for a decade researched the brain-wave activity of healers from all cultures and religious backgrounds (he enumerates psychics, shamans, dowsers, Christian healers, seers, ESP readers, kahuna, Santeria, wicca practitioners and others), and who, independent of their belief systems, exhibited "nearly identical EEG signatures" during their "healing" moments: a 7.8–8 Hz brain-wave activity, which lasted from one to several seconds and which was "phase and frequency synchronized with the Earth's geoelectric micropulsations—the Schumann resonance". (Sidorov, 2001)

Liquid crystals (DNA, brain ventricles and cellular structures) in the human body may operate as antennae for detecting and decoding such global and local ELF signals. Beal (1996) proposes that liquid crystals (which are an intrinsic part of cell membranes) act as

a detector/amplifier/memory storage device for ELF EM patterns in the environment. Proteins tend to orient themselves in the 10-Hz resonant EMF, and so would be extremely sensitive to ELF changes in the 10-Hz region. A coherent wave-field may emerge from the body's own liquid crystal (LC) matrix.

The very structure and organization of living tissues is, however, itself regulated by that master molecule, the DNA. The genetic system (consisting, to be more accurate, of an equidirectional translation function which may start equally well with DNA, RNA or protein) reveals itself as a complex, multidimensional code with both local (codon) and global (context) material (nucleotide) and field-like (EM hologram) parameters, all of which are mutually interdependent and at the same time subject to external, environmental influences. (Sidorov, 2002)

3. There is a strong correlation between behavioural disturbances in humans and periods of solar and geomagnetic field turbulence. Conversely, studies show that subjects living in isolation from geomagnetic rhythms over long periods of time developed increasing irregularities and chaotic physiological rhythms—which were dramatically restored after the introduction of a very weak 10-Hz electrical field. Early astronauts suffered until SR generators were installed in their spacecrafts.

4. Geomagnetic anomalies (tectonic strain, earthlights, geomagnetic field perturbations) can induce some forms of anomalous cognition, such as auditory and visual hallucinations, and TLTs (temporal lobe transients, or small seizures). Also, one of the effects of meditation is to "quieten the mind" as a method of allowing the "free-run" (or silent thalamic periods) to become entrained by natural geophysical rhythms. This form of tuning or "magnetoreception" is mediated by the pineal gland (30% of its cells are magnetically sensitive) and organic magnetite-containing tissues.

Persinger (1989) points out that deep temporal lobe activity exists in equilibrium with the global geomagnetic condition. When there is a sudden decrease in geomagnetic activity, there appears to be an enhancement of processes that facilitate psi reception, especially telepathy and clairvoyance. Increases in geomagnetic activity may suppress pineal melatonin levels and contribute to reductions of cortical seizure thresholds. Indeed, melatonin is correlated with temporal lobe-related disorders such as depression and seizures. (Krippner, 1996)

5. Optimal global ELF (calm night, low sunspot activity, low EM pollution) conditions can facilitate anomalous cognitions, including psi such as ESP, remote viewing and remote healing.

[P]si is always present in space and time, waiting to be accessed by crisis, emotion, or by optimal laboratory stimulus parameters. Geomagnetic activity may affect the detection capacity of the brain for this information, especially the neural pathways that facilitate the consolidation and conscious access to this information. Without this geomagnetic activity, awareness of the psi stimulus might not be as likely and the brain's "latent reserve capacities" would not be utilized. (Krippner, 1996)

6. Sidorov (2001) and others have suggested that human intent functions as a variable window of transmission/reception in the exchange of extrasensory information, possibly within the range of ELF electromagnetic frequencies. Brain synchronisation with Schumann's resonance of both sender and receiver facilitates psi, or "therapeutic entrainment", amplifying, re-radiating coherent waveforms derived from the environment, simulating the wave pattern of the environment. Sidorov further hypothesises:

[B]rain waves (particularly in the alpha range) can be transmitted along the perineural system (or via Frohlich excitation) to any

We are fundamentally electromagnetic, rather than chemical beings.

distal parts of the body, and even to adjacent organisms, via ELF EM waves. These frequencies can be amplified by closely related Schumann resonance waves, or by feedback mechanisms typical of the body's physiological pathways (akin to immunologic and neuroendocrinologic cascades). In turn, these basic frequencies can re-activate stalled healing processes, enhance growth, accelerate immune responses, and generally "jump-start" functions inherent to the body's tissues, by "rebalancing its energies" (according to Oriental medicine) or (in Beal's terminology) by re-configuring the liquid crystal orientation of cell membrane components and thus triggering specific intracellular responses. (Sidorov, 2001)

We are proposing, along with Pitkanin and Sidorov, that the Schumann's resonance may be the substrate for a radar-type extrasensory perception mechanism common to all living beings. Like water bouncing off rocks and other submerged objects, this non-specific frequency is absorbed and re-radiated in unique interference patterns by all objects it encounters.

This interference pattern is a composite of external and internal properties, as the constituent atoms, molecules and their global assembly all re-transmit this energy according to their specific configurations. Not only that, but the "sounding waves" can be frequency and pattern modulated by conscious intent in order to yield specific information (interference patterns). Decoded by the brain, they return almost instantly on the "back" of the Schumann's resonance. Once recaptured, the brain then decodes the patterns. In this Fourier-type transformation, the information is translated into conscious data, much like other sensory processing.

Conversely, specific effects may be imprinted as bioinformation and made to exercise a "mysterious action at a distance", once the signal wave reaches the target. That pattern in turn may, under the right ("pre-requisite") global conditions, avoid routine dissipation and instead become coupled to the dominating ("state-of-consciousness") standing wave that is picked up and carried by the Schumann's resonance.

Mental intent may function as a variable window of transmission/ reception in the exchange of extrasensory information. Tuned into the Schumann's resonance, it may carry such bio-regulating information to distant targets and act as a primitive, radar-type sensory interface. All these and more mechanisms depend on the SR frequencies staying within their median range, harmonising with our brain waves.

After nearly eight decades of EEG and other brain imaging studies, it is sobering to realize that we still can't tell with certainty where EEG voltages come from (Becker, 1985, p. 88)...

It is conceivable that Becker's perineural system and/or the LC matrix of the organism (including, but not limited to, connective tissues, cell membranes and DNA) might act as a full-body array of sensory receptors for Pitkanin's magnetic sensory canvas signals, with specific excitation patterns coding for different types of information...

[T]he body's ubiquitous liquid crystal arrays and their almost infinite configuration possibilities make them a top candidate for the primary sensory receptors parapsychology has been looking for. It is even conceivable that DNA phase-conjugation properties (Popp and Chang, 1998) allow it to function as a multi-mode antenna, altering its function according to surrounding signal fields and possibly acting not just as a regulatory program, but also an element of "extrasensory" perception. (Sidorov, 2002)

HAARP: A THREAT TO HUMANITY AND THE PLANET

As human beings we have extraordinary potentials that we have hardly begun to study, much less understand. Creative gifts, intuitions and talents that are unpredictable or emergent may become stabilised in generations to come. Hopefully we can learn to understand our emergence from an essentially electromagnetic environment and facilitate our potential for healing, growth and non-local communication.

A tremendous amount of money has been spent on HAARP and its allied projects (such as the proposed "Star Wars" missile defence program), without a complementary sum going towards research about potential hazards. The costs in both dollars and ruined lives could be staggering compared to any potential benefits derived from such programs. For epochs, Schumann's resonances have provided the orchestrating pulse for life on the planet—our planetary heartbeat, which sets the tempo for health and well-being.

But now, the very heart of the planet is in jeopardy, according to the Framework Convention on Climate Change (UNFCCC), signed

at the 1992 Earth Summit in Rio de Janeiro. The UN has banned the hostile use of techniques that modify the environment or interfere with the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space.

Why, then, did the UN, disregarding the 1977 ENMOD Convention as well as its own charter, decide to exclude from its agenda climatic changes resulting from military programs? In February 1998, the European Parliament's Committee on Foreign Affairs, Security and Defense Policy, held public hearings in Brussels on HAARP. The Committee's "Motion for Resolution" submitted to the European Parliament

(document no. A4-0005/99, 14 January 1999):

Considers HAARP...by virtue of its far-reaching impact on the environment to be a global concern and calls for its legal, ecological and ethical implications to be examined by an international independent body...; [the Committee] regrets the repeated refusal of the United States Administration...to give evidence to the public hearing...into the environmental and public risks [of] the HAARP program.

However, the Committee's request to draw up a "Green Paper" on "the environmental impacts of military activities" was casually dismissed on the grounds that the European Commission lacks the required jurisdiction to delve into "the links between environment and defence". Brussels was anxious to avoid a showdown with Washington.

While there is no concrete evidence of HAARP having been used, scientific findings suggest that it is at present fully operational. What this means is that HAARP could potentially be applied by the US military to selectively modify the climate of an "unfriendly nation" or "rogue state" with a view to destabilizing its national economy...

Amply documented, IMF and World Bank "economic medicine" imposed on the Third World and the countries of the former Soviet bloc has largely contributed to the destabilization of domestic agriculture. In turn, the provisions of the World Trade Organization (WTO) have supported the interests of a handful of Western agribiotech conglomerates in their quest to impose genetically modified (GM) seeds on farmers throughout the world.

We are proposing, along with Pitkanin and Sidorov, that the Schumann's resonance may be the substrate for a radar-type extrasensory perception mechanism common to all living beings.

It is important to understand the linkage between the economic, strategic and military processes of the New World Order. In the above context, climatic manipulations under the HAARP program (whether accidental or deliberate) would inevitably exacerbate these changes by weakening national economies, destroying infrastructure and potentially triggering the bankruptcy of farmers over vast areas... (Chossudovsky, 2000)

Hopefully we will come to appreciate this fully before our

technology drives the planet so far from the norm that the trajectory of human evolution is altered forever. Thus, it is more important than ever to study on the subtlest levels the relationship of our bodies with the electromagnetic environment and their interaction with potentially planet-altering technology. It seems that mankind now has the daunting task of determining whether the ionosphere and the Schumann's resonances will remain alive or be destroyed—whether the "Voice of the Planet" will continue to sing out or not.

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ROCKEFELLER

INTERNATIONALISM

**Power-hungry
Nelson Rockefeller,
second son of John
D. Rockefeller, Jr,
had a plan for a
New World Order
that would make
nation-states
redundant.**

Part 2

by Will Banyan © 2002–2003
(Revised January–April 2003)

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THE PUBLICIST: NELSON A. ROCKEFELLER (1908–1979)

In the 1940s and 1950s, the American power-elite held great expectations for the five sons of John D. Rockefeller, Junior. (Reflecting the prejudices of the time, Junior's daughter Abby was excluded from these deliberations.) Books such as Alex Morris's fawning effort, *Those Rockefeller Brothers: An Informal Biography of Five Extraordinary Young Men* (1953), for example, openly speculated on how Junior's progeny would advance the Rockefeller philanthropic agenda. Some of these expectations were met. John D. III and Laurance both seemed content to assume a patrician lifestyle steeped in philanthropy, while attempting to influence government from behind the scenes. David, of course, took this to a much higher level, combining it with a banking career; while Winthrop took the opposite route, dabbling in business and serving as Governor of Arkansas—then a relatively obscure position on the US political landscape.

It was Nelson, Junior's second-eldest son, who decisively broke the mould. In contrast to his more reserved brothers and at odds with family expectations, Nelson aggressively pursued a career in the highest levels of the US government, first as an official and later as a politician. That he would do so was inevitable, for he was the dominant personality in the new generation. He was an extrovert and was seemingly immune from Junior's pious strictures and prohibitions. Nelson also possessed a vast appetite for power, but, in a deviation from the family tradition of trying to dampen popular fears about Rockefeller power by maintaining a low public profile, he also sought to be widely known as a powerful individual.

Thus it was Nelson who had shunted aside the eldest son, John D. III, to take centre stage in family affairs, determined to control the philanthropic network. And then, after an erratic and unfulfilling career in government, he clumsily attempted to seize the ultimate political prize: the White House. And yet, for Nelson, the rewards would be mixed with frustration, and ultimately the toll would be high for him and the family name. Even David eventually came to see Nelson not as "the hero who could do no wrong but as a man who was willing to sacrifice almost everything in the service of his enormous ambition".²⁴

From Technocrat to Politician

Having no reservations about trading on the family name, Nelson used the doors it opened to pursue a wide-ranging career in the US government, in foreign policy positions in the Roosevelt, Truman and Eisenhower administrations, although his path was hardly smooth.

Under President Franklin D. Roosevelt, Nelson served as Coordinator of the Office of Inter-American Affairs (1940–44), Chairman of the Inter-American Development Commission (1940–47) and Assistant Secretary of State for Latin America (1944–45). His fortunes fell under Harry Truman, who dismissed Nelson from the State Department, apparently at the insistence of new Secretary of State Dean Acheson who resented Nelson's successful effort to have Axis-sympathetic Argentina included in the United Nations. A chastened Nelson retreated into philanthropy, pausing only to accept the token appointment as Chairman of the International Development Board (1950–51).

Under Dwight Eisenhower, Nelson's star briefly rose again. He served as the President's Special Assistant on Foreign Policy (1954–55) and as head of the secret "Forty Committee" charged with overseeing the CIA's covert operations. Nelson had been on the verge of securing a senior position in the Department of Defense; however, concerted opposition from other Cabinet members, who had convinced Eisenhower—correctly—that Nelson was

intent on massively expanding the Defense budget, ensured that his career as a public official came to an abrupt end.

These experiences were salutary for the ambitious Nelson. His bruising encounters with Establishment technocrats—who clearly resented his intrusion into *their* realm—instilled in him a yearning for greater political power. Nelson was not content to operate behind the scenes like his brothers, nor willing to endure more humiliation as a mere functionary.

According to author Stewart Alsop, Nelson eventually realised that "there was only one way for a very rich man like him to achieve what he had always wanted—real political power and authority. That way was to run for office".²⁵ And for Nelson, the ultimate political office he desired was President of the United States.

In 1958, drawing on his vast inheritance, Nelson launched his political career, defeating W. Averell Harriman in the "battle of the millionaires" to become Governor of New York, a position he would hold until 1973. Expecting the New York governorship to be a stepping-stone to the Presidency, Nelson campaigned for the Republican presidential nomination in 1960, 1964 and 1968 but failed every time, losing twice to his nemesis, Richard Nixon.

Ironically, it was in the wake of Nixon's resignation in 1974 over the Watergate scandal that Nelson finally entered the White House, but as an appointed Vice-President to an appointed President, Gerald Ford. Ford's survival of two blundered assassination attempts meant that Nelson remained only a famed "heart-beat away" from the Presidency, never achieving his goal.²⁶ So near, yet so far, it was no wonder that when Nelson was asked, close to the end of his life, what he wished most to have done, his reply was curt: "Been President".²⁷

Internationalist or Imperialist?

There are two competing interpretations of Nelson's foreign policy vision during his political career. The first is of a diehard anti-Communist, dubbed by some journalists as the "Coldest Warrior of Them All", and a militarist-imperialist who believed the US should "act aggressively whenever events abroad threatened its own interests" (Chapman). Proponents of this view point to Nelson's "necrophiliac ambition" (Fitch) of providing each American family with its own nuclear fallout shelter, his calls in 1960 for a 10 per cent boost in Defense spending, his attacks on Eisenhower for letting the US fall behind the Soviet Union in the famed (but illusory) "missile gap", and his apparent eagerness to use tactical nuclear weapons against Communist insurgents.²⁸

The second interpretation, in contrast, presents Nelson as "a leader in the campaign to submerge American sovereignty in a World Superstate".²⁹ "I think Nelson Rockefeller is definitely committed to trying to make the United States part of a one world socialist government," declared John Birch Society founder Robert Welch in 1958.³⁰ Far from being the ultimate Cold Warrior, Nelson is portrayed as a covert supporter of the alleged plot by the super-rich to use Communism to subvert the sovereignty of the US and of other "free nations" worldwide.

Yet these mutually inconsistent caricatures fail to capture the true essence of Nelson's world order strategy, which in the *short term*

sought to assert America's full military power to defeat Soviet Communism, and in the *long term* envisaged the United States using its superpower status to create a "new world order" based on world federalism, regional blocs and international free trade. The influences on Nelson's foreign policy thinking were numerous, ranging from his father and Fosdick through to the plethora of political and specialist foreign policy advisers he employed. But it is important to realise the different sources for each approach.

Starting with Nelson's stridently anti-Communist *short-term* outlook, we find a surprising source. Since his uninspiring departure from the Eisenhower Administration in 1955, Nelson had employed as his foreign policy adviser Dr Henry Kissinger, then a leading proponent of *Realpolitik* and a rising star in the Establishment. Kissinger is widely regarded as a proponent of world government, but this assumption stems primarily from the crude analytical tool of guilt by association, in which Kissinger's CFR membership is cited as the primary evidence of this alleged tendency. There can be no doubt that Kissinger is a particularly loathsome creature of the Eastern Establishment and an egotistical, deceitful and opportunistic character at best,³¹ but a world government proponent he is not.

For instance, in his first CFR book, *Nuclear Weapons and Foreign Policy*, Kissinger explicitly rejected the option of world government as "hardly realistic", adding that there was "no escaping from the responsibilities of the thermonuclear age into a supranational authority".³²

Despite this, Kissinger was still of value to Nelson, providing support to his more belligerent anti-Communist fantasies. According to Joseph Persico, Nelson's speechwriter of some 11 years, "Kissinger's hard-eyed vision of a world maintained by counter-balancing powers suited Nelson perfectly".³³ But Kissinger's

influence should not be overstated. For one, Nelson's balance-of-power thinking stemmed from his reflexive anti-Communism, which characterised the Soviet bloc as America's greatest threat. That was *the* balance of power in the world at that time, and thus Kissinger's unsentimental views suited Nelson.

However, in his *longer-term* outlook, Nelson was undeniably a Wilsonian liberal internationalist—something he had already demonstrated intermittently since the 1940s. For example, Nelson was instrumental, through the controversy generated over his push to have Argentina included in the United Nations, with ensuring that Article 51—which allows for groups of states to form alliances to repel aggression—was included in the final UN Charter.³⁴ But at the same time, not content with the UN system that included the Soviets, and determined to "purify" Central and South America of "alien commercial influence", Nelson was a strong supporter of regionalism, particularly the goal of a Western hemisphere "united under US leadership".³⁵ During the Eisenhower Administration, Nelson had been one of the strongest supporters of the Atlantic Union concept, despite Secretary of State John Foster Dulles's patronising dismissal of his views as "premature".³⁶

It was also during the late 1940s and early 1950s that Nelson, in support of his goal of encouraging Western hemispheric unity—or, more precisely, establishing US economic dominance over Latin America—had established the American International Association for Economic and Social Development (AIA) and the International Basic Economy Corporation (IBEC). The AIA was ostensibly

There can be no doubt that Kissinger is a particularly loathsome creature of the Eastern Establishment, but a world government proponent he is not.

intended to promote development in Latin America and combat "poverty, disease and illiteracy", while IBEC was supposed to encourage capital investment. The founding president of both institutions, Nelson naturally painted AIA and IBEC as being designed to achieve the desirable goal of development. Yet, in truth, Nelson was driven by a baser aim of breaking down national barriers to penetration by American companies in line with the shift in Rockefeller wealth from oil to international banking and Third World investment.³⁷

In describing the activities of AIA and IBEC, Nelson employed language that is often employed by contemporary advocates of globalisation. "Today," Nelson stated in the late 1940s, "capital must go to where it can produce the most goods, render the greatest service, meet the most pressing needs of the people." Discussing IBEC operations in Latin America, Nelson noted that because of the "big problems" confronting "our way of life", it was essential that they demonstrate "that American enterprise can...help to solve these problems that are vital to our everyday life and to our position in world affairs". He said the US needed to "master such problems if our system is going to survive".³⁸ For all his rhetoric on helping people, ultimately it was protecting and extending "our system" that was paramount for Nelson.

Three Sources of Inspiration

For the most definitive expressions of Nelson's liberal-internationalist vision, we must look to his political career as presidential aspirant from the mid-1950s through to 1973. And we can see that, just as Fosdick influenced Junior, at least three sources of inspiration drove Nelson's vision during that period.

• The first main influence on Nelson was the Rockefeller Brothers Fund report of 1959, *Prospect for America*. Aided by David, Laurance, Winthrop and the family fortune, Nelson had mobilised nearly a hundred members of the Eastern Establishment to participate in his project, which was specifically intended for his presidential campaigns. The participants were divided into six panels: three focused on the domestic issues of democracy, education and the performing arts, while the other three dealt with defence, US foreign policy and international trade and economic development. Nelson drew heavily on *Prospect for America's* detailed recommendations for US leadership in establishing regional arrangements and global free trade and strengthening international institutions.

Prospect for America's policy advice reinforced the Establishment's Wilsonian liberal-internationalist consensus, recommending that America's goal should be to establish "a world at peace, based on separate political entities acting as a community", as it was now America's "opportunity...to shape a new world order". This would consist of "regional institutions under an international body of growing authority—combined so as to be able to deal with those problems that increasingly the separate nations will not be able to solve alone". To advance the free trade agenda, the report argued that the US should encourage the formation of "regional trading systems" in "all areas of the free world", including a "Western Hemisphere Common Market" incorporating North, South and Central America. The report had also lauded the United Nations as "proof of our conviction that problems which are of

world-wide impact must be dealt with through institutions global in their scope".³⁹

• The second, and less well known, influence on Nelson was Emmet John Hughes (1920–1982). He was Eisenhower's speechwriter, a Senior Adviser on Public Affairs to the Rockefeller Brothers Fund (1960–1963), and Nelson's campaign manager in 1968. Although not a prominent figure, Hughes is described in some accounts as one of Nelson's more "trusted aides", serving as the "chief ideologue" or "campaign theoretician" during his abortive campaigns for the Presidency.⁴⁰ Hughes was also a liberal-internationalist. In *The Ordeal of Power* (1963), his memoir of his time as Eisenhower's speechwriter, Hughes boasted of having inserted into Eisenhower's speeches expressions of US support for international law, the UN, disarmament and the redirection of arms spending towards alleviating world poverty—a vision revealed in Eisenhower's "The Chance for Peace" speech of April 16, 1953, where he asked Americans to support a plan to join with "all nations" in devoting the savings from disarmament to "a fund for world aid and reconstruction".⁴¹

• The third influence was Rockefeller's close friend and adviser Adolf Berle (1895–1971), who also provided much input into Nelson's internationalism. In the late 1940s, Berle's Cold War vision included creating a "global Good Neighbor Policy that organized a community of liberal nations" to oppose the USSR. He

opposed NATO, arguing that the "whole language of military alliance is out of date", and supported collective security through the United Nations instead. Berle also believed in the virtues of international economic integration, evident in his 1954 book *The 20th Century Capitalist Revolution*, which argued that the dynamic capitalist economy was rendering the nation-state redundant.

He also provided input to the *Prospect for America* project, devising the guidelines for the panels and stressing the need to develop "an accepted political philosophy" for US

foreign policy. In addition, Berle collaborated with Kissinger in writing the final report, and his stamp can be seen in those sections which are the most forthright in arguing for supranational institutions and international economic integration.⁴²

Nelson's "New World Order"

The culmination of these influences was effectively a slightly updated version of the Wilson–Fosdick world order model that comprised free trade, regionalism, supranational institutions, American leadership and the defeat of Communism. Nelson willingly and repeatedly endorsed this policy package in his drive for the White House. Central to Nelson's platform was the contention that global change, specifically economic interdependence, was making the nation-state redundant. As far back as 1951, Nelson had used the word "interdependence" to describe the economic relationship between the Western countries and the developing world.⁴³ But it was in a 1960 essay in *Foreign Affairs* that Nelson asserted that "the central fact of our time is the disintegration of the nineteenth-century political system...[t]he great opportunity of our time is not the idea of competition but of world cooperation".⁴⁴ Similarly, in his lectures on federalism at Harvard University in 1962, Nelson claimed:

**As far back as 1951,
Nelson had used the word
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the economic relationship
between the Western countries
and the developing world.**

*No nation today can defend its freedom, or fulfil the needs of its own people, from within its own borders or through its own resources alone. ...the nation-state, standing alone, threatens, in many ways, to seem as anachronistic as the Greek city-state eventually became in ancient times...*⁴⁵

Nelson argued that as the nation-state was becoming "less and less competent to perform its international political tasks", the prevailing structures of international order had disintegrated, leaving "an historical political vacuum".⁴⁶ The old world order based on the 19th-century balance of power was no more, now that "international relations have become truly global"—a factor which demanded a "new concept of relations between nations" in the form of a "framework of order in which the aspirations of humanity can be peacefully realized..."⁴⁷

At the same time, Nelson was critical of the role of the United Nations, arguing that it "has not been able—nor can it be able—to shape a new world order as events now so compellingly command". He charged that the Soviet Union and its allies had weakened the UN. The Communist bloc, Nelson claimed, had dedicated itself to "the manipulation of the UN's democratic processes, so astutely and determinedly, as largely to frustrate its power and role". But the threat posed by the Communist bloc extended beyond damaging the UN, to attempting to realise its own "cruel design...for world order". The Communists had "taken our words, our forms, our very symbols of man's hopes and aspirations and...corrupted them to mislead and to deceive in their quest for world domination".⁴⁸

During the 1968 presidential primaries, however, Nelson was less pessimistic about the UN, maintaining that the international organisation was not a failure. "On balance," Rockefeller stated at a Republican Party fundraising dinner in California, "the record shows that the United Nations' strength has grown..." The question for Americans, however, was twofold: "How well can the United Nations serve the United States' national interest, and how effectively can it promote a more stable world order...?" Nelson's answer was that both were possible. Although the US could not hope to control the UN completely, it could still act in America's "national interest" (usually a code for business interests) by maintaining world order using the resources of other member-states. UN peace-keeping operations (PKOs) he said "have made a vital contribution toward the building of a more stable world order" and had done "multilaterally what the United States might have had to do itself at much greater cost". Actions through the UN were "often the best way of controlling dangerous crises", as "unilateral actions" such as Vietnam "frequently tend to boomerang". It was "perfectly clear", insisted Nelson, that UN PKOs "have strengthened world order and...also advanced United States policy objectives".⁴⁹

It was therefore in America's interest, according to Nelson, to "take the initiative in strengthening the role of the UN as mediator and peace-maker", as the UN "can and must be utilised as a primary instrument" in the quest for a "better world". In support of this goal, Nelson advocated that the US take the lead in "bringing

disputes to the UN before they 'go critical'" and "encourage strong leadership" by the UN Secretary-General, including greater emphasis on "preventive diplomacy...quiet diplomacy, and less reliance on voting *per se* for the achievement of our national objectives". Insisting that the UN's peace-keeping functions needed to be strengthened, Nelson advocated encouraging "small countries" to set aside troops for UN PKOs, developing new sources of revenue for PKOs, and a greater focus on "peacemaking".⁵⁰

If Nelson's proposals seem strangely familiar now, it is because many of them were endorsed in UN Secretary-General Boutros Boutros-Ghali's 1992 report, "An Agenda for Peace". In fact, Boutros-Ghali seemed to echo Nelson with his recommendations for "preventive diplomacy" and "peacemaking" and for countries to have personnel and equipment on "stand-by" for peace-keeping operations. Yet, in spite of a brief flurry of activity during the 1990s, such proposals are as far from being realised now—especially given the Bush Administration's suspicion of UN peace-keeping—as they were in Nelson's time.

The "better world" that Nelson had in mind to replace the existing system of nation-states was essentially a limited world federation that united all the non-Communist states. In his 1968 book, *Unity, Freedom & Peace*, Rockefeller argued that if the federal idea—as applied by the "Founding Fathers...in their historic act of political creation in the eighteenth century"—could be applied "in the larger context of the world of free nations", it would "serve to guard freedom and promote order in the free world".⁵¹

In his Harvard lecture, Nelson revealed that he had "long felt that the road toward the unity of free nations lay through regional confederations in the Western Hemisphere and in the Atlantic, perhaps eventually in Africa, Middle East, and Asia".⁵²

To achieve this goal, Nelson endorsed the extension of the European Economic

Community (EEC) to embrace "the North Atlantic Community as a whole".⁵³ "European *political unity* would be an important first step" in forming an "Atlantic Community", he claimed.⁵⁴

Furthermore, by encouraging similar developments in the Americas, the US could take the lead in the formation of a "Pan American Economic Union", which would result in "the creation of the greatest free-trading area in the world".⁵⁵

But Nelson was equally clear that regional arrangements were a means to an end; that because of the Communist threat and global problems, "our advances toward unity must now extend to action *between* regions as well as *within* them".⁵⁶

Thus, the new regional arrangements should be seen as steps towards global integration:

*Unity in the West implies an act of political creation—comparable to that of our Founding Fathers—and perhaps of even greater originality, daring and devotion. In our time, the challenge leads us, compels us, inspires us, toward the building of our great North Atlantic alliance, our "regional grouping" into a North Atlantic Confederation—looking eventually to a worldwide Union of the Free.*⁵⁷

Under the aegis of the Trilateral Commission, David had mobilised the Establishment against the Realpolitik of the Nixon Administration with profound effect.

Earlier at Harvard, he had argued that the peril of not unifying on such lines was more dramatic:

*The historic choice fast rushing upon us then, is no less than this: either the free nations of the world will take the lead in adapting the federal concept to their relations, or, one by one, we may be driven into the retreat of the perilous isolationism—political, economic and intellectual—so ardently sought by the Soviet policy of divide-and-conquer.*⁵⁸

Nelson Rockefeller also advocated the long-time liberal-internationalist argument that the US should promote global free trade to strengthen the free enterprise system and thus link together the other non-Communist parts of the world. He said there should be a "continuation and expansion of a liberal US trade policy" on the grounds that it not only helped developing countries but it benefited the US economy.⁵⁹ And in an argument that continues to be heard today as "open regionalism", Nelson argued that the formation of regional free trade groupings could be a means to establish global free trade:

*The regional arrangements in Europe and the Hemisphere should be used as patterns for the economic organization of other parts of the world. For the key fact is that no nation is capable of realizing its aspirations by its own efforts. Regional groups pursuing ever more liberal trade policies towards each other could thus be a step towards the goal of a free world trading system.*⁶⁰

Taking this argument further, in a speech to the Executive Club in Chicago in 1964, Nelson recommended that Washington should use its political influence to "establish rules under GATT, assuring that regional economic accords will move toward progressive trade liberalisation rather than further partitioning of world trade into compartments sealed off by preferences and discrimination".⁶¹

Nelson also endorsed the formation of a "world central bank" that would "preclude crises and contribute to world-wide economic advance", suggesting that the role of the International Monetary Fund be "broadened in that direction".⁶²

Above all, the most consistent theme in Nelson's internationalist ideology was the importance of US leadership. The United States, he argued in numerous forums, should take the lead in the building of a worldwide federation, as the US had come into existence "for the sake of an idea" that "man should be free to fulfil his unique and individual destiny—a belief based upon our dedicated faith in the brotherhood of all mankind".⁶³ "The upheaval in the world will subside only with the emergence of a more or less generally accepted international system", he wrote in 1968. "The goal is order...though we cannot create order by ourselves, it surely cannot come about without us."⁶⁴

America was too interconnected with the world to escape its obligations, Nelson argued; in fact, "the true interests of America are interdependent with the interests of free world nations". The implications were obvious:

*We must assume a role of leadership worthy of the United States and commensurate with our own best interests as well as those of the free world as a whole.*⁶⁵

Even the demise of Communism would not free the US of this burden:

*[W]e face tasks which would be essentially the same even if Communism had never existed. We are required to work with the peoples of the world to develop a real world community.*⁶⁶

Though his hopes of reaching the White House were fading by the 1970s, Nelson Rockefeller still sought political relevance and did so by embracing the latest fad of environmentalism, and again inserted an internationalist bent. In his book, *Our Environment Can Be Saved* (1970), Nelson invoked the obvious international political implications for pre-empting environmental degradation, arguing that preventing the impending "environmental crisis" could "become an area of increased cooperation between nations". To that end, he recommended that the US should "help coordinate international planning for environmental controls".⁶⁷

The Accidental Vice-President

Yet, as fate would have it, the political and personal self-destruction of his nemesis, Richard Nixon, presented Nelson with an unexpected prize, and in December 1974, after a lengthy and revealing confirmation process by a suspicious Congress,⁶⁸ he

became Vice-President in the short-lived Ford Administration. Despite Nelson being next in line for the Presidency, his foreign policy pronouncements were few and far between in that period. With his protégé Henry Kissinger commanding foreign policy as Secretary of State, Nelson had anticipated exercising control over domestic policy. However, Nelson fell foul of Ford's Chief of Staff, Donald Rumsfeld, who was determined to keep the Vice-President powerless.⁶⁹

Although eventually appointed Vice-Chairman of the Domestic

Council, Nelson found himself largely sidelined from decision-making. When describing his actual position, Nelson would quip: "I go to funerals. I go to earthquakes."⁷⁰ His input into US foreign and national security policy was limited to serving on the Commission on the Organization of Government for the Conduct of Foreign Policy in 1974, and more controversially as Chairman of the Commission on CIA Activities within the United States in 1975.⁷¹

In the final analysis, though, Nelson's somewhat marginal role in the Ford Administration is in itself of no consequence, for the Wilsonian liberal-internationalist agenda was adopted by Ford and Kissinger anyway, although this is more attributable to the machinations of David Rockefeller. Under the aegis of the Trilateral Commission, David had mobilised the Establishment against the *Realpolitik* of the Nixon Administration with profound effect. Gone was Nixon's previous talk of a "safer world" through an "even balance" of all the great powers and disdain for the United Nations.⁷² In its place was an uncharacteristic (especially for Kissinger) embrace of international law, institutionalised cooperation among the industrial powers (rather than alliances), and notions of a "world community" and growing global "interdependence".⁷³ Indeed, as the head of the Council on Foreign Relations' "1980s Project" observed in 1976, "President Ford's fulsome statements at the Western summits of Rambouillet and San Juan and many of

If Nelson's proposals seem strangely familiar now, it is because many of them were endorsed in UN Secretary-General Boutros Boutros-Ghali's 1992 report, "An Agenda for Peace".

Kissinger's recent speeches could have been lifted from the pages of [the Trilateral Commission's journal] *Trialogue*..."⁷⁴ Rockefeller Internationalism had again made its mark, but, in a major irony, Nelson, despite being the Vice-President, had only a peripheral role.

His marginal role was reinforced when, in November 1975, at Ford's insistence, Nelson withdrew his candidacy for Vice-President in the 1976 presidential elections. It was Rumsfeld's doing; believing Rockefeller to be an electoral liability, the zealous Chief of Staff pushed to have Nelson dumped from the Republican presidential ticket. Instead of the Vice-Presidency being the final stepping-stone to the Oval Office, as Nelson undoubtedly hoped, it became a dead-end in his political career.

According to David Rockefeller, "Ford's decision devastated Nelson" and caused him to lose all interest in politics. Moreover, "Thwarted when the greatest political prize seemed within his grasp", Nelson ended his political career an "angry and deeply bitter man". He returned to the family fold where, in one last grasp at power, he tried—and failed—to wrest control of the RBF from his brothers.⁷⁵

The end for Nelson Rockefeller was sudden and suitably controversial, the 70-year-old ex-politician reputedly dying in the midst of a sexual tryst with one of his female staffers. Nevertheless, Nelson's passing in 1979 was the cause of much pious reflection from the corporate-controlled US media and some of his former beneficiaries. *Time* magazine claimed that "He was driven by a mission to serve, improve and uplift his country", while the *New York Times* lauded Nelson's "enlightened internationalism" and "extraordinary standard of concern and effort in service of the country".⁷⁶

Less restrained was Henry Kissinger, who eulogised his departed benefactor as the "greatest American I have ever known", a "pragmatic genius" who "would have made a great President". In fact, it was "a tragedy for the country" that Nelson had not achieved his goal. Kissinger also claimed that Nelson's impact on American

domestic and foreign policy was greater than many people supposed:

*...in the final accounting it was often Nelson who worked out the agenda which others then implemented as national policy. The intellectual groundwork for many innovations was frequently his... Destiny willed it that he made his enduring mark on our society almost anonymously in the programs he designed, the values he upheld, and the men and women whose lives he changed.*⁷⁷

If we put to one side Kissinger's fawning and somewhat inaccurate eulogy, Nelson Rockefeller's rise and demise reveals that his contribution to the New World Order was marginal at best. There can be no doubt that had Nelson been President of the United States, even if only for a few years, he would have set in motion the globalist plans he had endorsed throughout the 1960s. Fortunately—though some Establishment figures might disagree—it was not to be.

But Nelson's failure to get into the Oval Office effectively reduced him to little more than a publicist of the Rockefeller family's New World Order vision. He promoted the policies for global government, but was never able to order their implementation. As Nelson was unable to secure the high office he craved and was largely detached from those philanthropic institutions—especially the RBF and Rockefeller Foundation—that gave the Rockefellers their real power, the bitterness of his final years should come as no surprise.

As we shall see in the following parts, it was those Rockefeller brothers who were the most heavily involved in philanthropic pursuits, including the foundations, think-tanks and policy-planning organisations supported by Rockefeller money, who have had the most impact on formulating the NWO ideology and implementing it. And the leading Rockefeller in that endeavour has been, of course, David...

Continued next issue ...

Endnotes

24. David Rockefeller, *Memoirs*, Random House, 2002, p. 191. It should be noted that, somewhat improbably, the impetus for David's moment of clarity was Nelson's divorce of his first wife, Mary Todhunter Clark, in 1961—and not his ruthless drive for political power or his bullying of his siblings for control of Rockefeller finances to fund his numerous campaigns. Moreover, David's explanation overlooks how politically costly Nelson's divorce was to his 1964 campaign.
25. Stewart Alsop, *Nixon & Rockefeller: A Double Portrait*, Doubleday, 1960, p. 80.
26. As Jonathan Vankin notes, "If not for a couple of jammed pistols, Nelson Rockefeller would have fulfilled his dream of becoming President—without winning a single vote"; see Vankin, *Conspiracies, Cover-Ups and Crimes: From JFK to the CIA Terrorist Connection*, Dell Publishing, 1992, p. 259.
27. Quoted in Cary Reich, *The Life of Nelson A. Rockefeller: Worlds to Conquer, 1908–1958*, Doubleday, New York, 1996, p. xvii.
28. Stephen Chapman, "Rocky as St Sebastian", *The New Republic*, February 10, 1979, pp. 12-14; Robert Fitch, "Nelson Rockefeller: An Anti-Obituary", *Monthly Review*, June 1979, p. 13.
29. Gary Allen, *The Rockefeller File*, '76 Press, 1976, p. 50.
30. Robert Welch, *The Blue Book of the John Birch Society*, Western Islands, 1961, p. 113.
31. For a scathing review of Kissinger's myriad sins, including possible war crimes, see Christopher Hitchens, *The Trial of Henry Kissinger*, Text Publishing, 2001.
32. Henry A. Kissinger, *Nuclear Weapons and Foreign Policy*, Council on Foreign Relations/Harper & Brothers, 1957, pp. 219-221.
33. Joseph Persico, *The Imperial Rockefeller: A Biography of Nelson A.*

Rockefeller, Simon & Schuster, 1982, pp. 82.

34. Alsop, *Nixon & Rockefeller: A Double Portrait*, pp. 88-89.

35. Peter Collier and David Horowitz, *The Rockefellers: An American Dynasty*, Holt Reinhart & Winston, 1976, pp. 230, 236-238.

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37. Blanche W. Cook, *The Declassified Eisenhower: A Divided Legacy of Peace and Political Warfare*, Penguin Books, 1981, pp. 295-296.

38. Ferdinand Lundberg, *The Rich and the Super-Rich: A Study in the Power of Money Today*, Lyle Stuard Inc., 1968, pp. 593-594.

39. Rockefeller Brothers Fund, *Prospect for America: The Rockefeller Panel Reports*, Doubleday, 1961, pp. 24, 26, 34, 35, 188, 228 (emphasis added).

40. Peter Collier and David Horowitz, *The Rockefellers*, pp. 340, 344; Persico, *The Imperial Rockefeller*, p. 71.

41. Emmet John Hughes, *The Ordeal of Power: A Political Memoir of the Eisenhower Years*, Atheneum, 1963, pp. 102-113 (including speech quote), 218-221.

42. Jordan A. Schwarz, *Liberal: Adolf A. Berle and the Vision of an American Era*, The Free Press, 1987, pp. 304-305, 311-312.

43. Nelson A. Rockefeller, "Widening Boundaries of National Interest", *Foreign Affairs*, July 1951, p. 527.

44. Nelson A. Rockefeller, "Purpose and Policy", *Foreign Affairs*, April 1960, p. 383.

45. Nelson A. Rockefeller, *The Future of Federalism: The Godkin Lectures at Harvard University 1962*, Harvard University Press, 1962, pp. 63-64.

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— MANGANESE & INFRASOUND — THE LINK TO MAD COW DISEASE

Politicians and scientists have erred in claiming that BSE is hyperinfectious and can only be managed by the wholesale slaughter of livestock, while the corporations have profited at the expense of small farmers.

Part 2 of 2

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Is Rogue Ferrimagnetic Manganese the "Infectious" TSE Agent?

Once the crucial supply of copper is curtailed in the brain, due to straightforward environmental copper deficiency or exposure to copper-chelating organophosphate (OP) insecticides, etc., the prion protein's metal bonds become vacant, rendering the protein vulnerable to bonding up with certain alternative metals such as manganese, strontium, silver or lithium. But these foreign substitutes may not act in the overall best interests of the organism, particularly if the invasive metal is in "ferrimagnetic" form.

So when ferrimagnetic manganese substitutes at the vacant copper bonds on the prion protein, the field-inducing influence of its ferrimagnetically ordered atoms will progressively corrupt the circadian-mediated pathways of electromagnetic superexchange throughout the brain, whereby a status of permanent magnetic charge is spread via a domino-style of contagious corruption which jumps from metal bond to metal bond, from prion to prion. This phenomenon is well illustrated by the classic college physics experiment, where a magnet is placed alongside a steel nail and the force field of the magnet rapidly magnetises the adjoining nail.

Once an individual's brain is contaminated by this freaky form of metamorphosed manganese, any subsequent exposure to external electromagnetic fields (e.g., UV, sound waves, radar, cell-phones, etc.) will permanently charge up the ferrimagnetically ordered manganese prions. The metals rapidly become permanently saturated with magnetic charge, generating intensive magnetic fields which, in turn, generate self-perpetuating "cluster bombs" of free-radical-mediated spongiform neurodegeneration. TSE ensues.

In this respect, the TSE-diseased brain can be likened to a solar-powered battery on continuous charge, where the manganese-loaded/copper-depleted brain is no longer equipped to deal with the incoming surges of electromagnetic energy from the external environment. Instead of utilising this energy for the body's own vital requirements, it becomes perverted into a potent force for neuronal suicide.

This theory explains why the so-called "hyperinfectious" property of the prion is a misnomer. It is the toxic ferrimagnetic metal component of the prion that serves as the so-called "infectious" pathogenic agent in TSEs (transmissible spongiform encephalopathies). So whenever scientists inoculate unfortunate laboratory animals with TSE brain tissues (e.g., tissues contaminated with this rogue manganese atom) and effectively transmit TSE, they are actually transmitting "a magnetic field-inducing capacity" that is carried along with the ferrimagnetically ordered manganese contaminant into the recipient animals which, in turn, develop TSE.

Furthermore, the concept of the rogue ferrimagnetic manganese atom as the "TSE agent" also explains why the "infectious" pathogenic capacity of the prion can survive heating to temperatures in excess of 500 degrees Celsius—since ferrimagnetic metals will hold onto their magnetic charge until they are heated to temperatures beyond their respective "curie point" temperature (e.g., 550°C for manganese 3+).

A Theory that Addresses All the Missing Links in TSE Science

Some would question how the toxic manganese theory of TSE origins can account for the well-recognised "iatrogenic" form of TSE, where growth hormone treatment of humans—which utilises pituitary tissue as the pharmacological inoculant—can lead to a form of CJD (Creutzfeldt-Jakob disease). But intriguingly, tissues such as pituitary and retina, which transmit TSE in the lab most efficiently, are the same tissues in which manganese is recognised to concentrate most intensively in the body. So once an individual is contaminated with a rogue source of ferrimagnetic manganese, any subsequent use of their pituitary tissues in pharmaceuticals for growth hormone therapy could spread the so-called "infectious" toxic agent and initiate CJD.

Others would question how this theory can account for the outbreak of the kuru strain of TSE that exclusively erupted in an isolated tribe in the Fore region of the New Guinea Highlands. The conventional dogma blames this outbreak upon the Fore tribe's traditional practice of cannibalism. Whilst cannibalism may have played a role in the bioaccumulation of manganese—particularly if the pituitary tissues were ingested in these cannibalistic binges—the fact that virtually every tribe across New Guinea had adhered to a cannibalistic lifestyle, yet remained free of kuru, needs to be addressed by those who promote this theory. And furthermore, considering that cannibalism had been traditionally practised for centuries across New Guinea, why did kuru fail to erupt until a few years after World War II?

My investigations suggest that the cause of kuru stems from the same template of eco-factors: the Fore tribe's self-sufficient lifestyle on copper-deficient soils, coupled with their scavenging of manganese-aluminium sheet metal from the fuselages of several Japanese bomber aircraft which had crashed in their area of the Highlands during World War II. The Fore folk moulded the salvaged metal to make tools, cooking pans and bowls, and these consequently contaminated their foods. They also accidentally exploded some of the bombs on board the crashed aircraft. These infamous explosions—well remembered by the surviving Fore folk—infractionally irradiated their local environment.

This story goes on. At the mouth of the Fuji River valley in Japan is a manganese-aluminium alloy factory that manufactured these metal aircraft panels from the late 1930s and still makes Mn-Al alloy products today. The manganese-enriched chimney emissions dispersed downwind, permeating the entire length of the valley. Intriguingly, a cluster of CJD has blighted the residents of the Fuji River basin for 50 years. Note that it can take up to 20 years for the toxic effects of metal/chemical exposure to manifest.

The role of prion protein genetics is also entirely compatible with the environmental facets as part of the overall multifactorial aetiology of TSEs. For it is well established that prion protein genetics plays a major role in dictating which individuals are most susceptible to TSEs—where susceptibility hinges upon the expression of a defective prion protein that can only bind two or three atoms of copper instead of the usual five. But the sole focus of TSE susceptibility studies to date has almost exclusively concentrated upon the role of prion protein genotypes. Yet my own studies have revealed that white/fair skinned or yellow/red-pigmented individuals are at much greater risk of developing TSE. This suggests that the genetics of melanin expression may also perform a genetic role in the cause of TSE.

Note that melanin is involved in cushioning the toxic side-effects of light and sound absorption. Some support for this observation was amassed when unfortunate laboratory mice were genetically engineered to express a mutant form of melanin and consequently developed spongiform encephalopathy.

Animal Pharm

Despite publication of the hard evidence in support of this theory in prestigious scientific journals (see bibliography), the various UK authorities and their incestuous clique of "minder" advisers are blindly ignoring these findings. What's more, they are doing their utmost to publicly marginalise those of us who are trying to pursue this alternative research line, and are using public money to implement their

tactics of suppression in the bargain.

For 18 years, my work and personal integrity have been subjected to a steady derisory trickle of ridicule and dirty tricks. During the 1980s, my farm and family became the victims of a raft of "once in a lifetime" type of physical disasters: arson, firearm intimidation, vandalism of my research library and communications, and an insidious infiltration by a bizarre array of bogus greens and phoney freelance journos—not to mention a seductive approach by a scantily clad pseudo student who was supposedly doing her dissertation on my theory. I became suspicious, and my investigations revealed that she was not even registered at the college where she was purportedly studying!

It invariably transpired that the true objectives of these *agents provocateurs* was to subtly set about discrediting my social and scientific esteem whilst finding out the current state of play of my research investigations. Once my work gained support from the likes of the former Defence Minister, Tom King, and HRH the Prince of Wales, the physical aspects of this harassment abruptly ceased.

My recent demands to various UK government departments—agriculture, environment, health, etc.—for access to my personal data under the new Data Protection Act revealed much of what had been going on behind the scenes. Repeated requests by Environment Minister Michael Meacher to meet personally with me had been deliberately stymied by his own officials.

When Mr Meacher eventually broke through his barrage of officials to make direct arrangements with me, the meeting was postponed on five separate occasions and then arrangements completely fizzled out. Other documents revealed how the British Agrochemical Association had been organising a "joint initiative" with the Ministry of Agriculture's own grant funding department to channel public funds into a live animal trial that had been deliberately designed to refute my theory.

Since the BSE Inquiry had rejected the official scrapie/BSE hypothesis and found in favour of some aspects of my own hypothesis, the UK government responded by setting up a further mini-inquiry to re-look at the origins of BSE. The resulting publication, known as the "Gabriel Horn Report", employed a judicious selection of misrepresentation and outright bogus disinformation in order to discredit the validity of my theory.

For example, the report stated that the use of OP warblecides had ceased in the UK by 1982 and that warblecides had been used routinely on the island of Jersey. So, according to the Horn Report, if OPs were the cause of BSE, why were all of the cows that developed BSE born after 1982 and why were BSE rates so low on Jersey? Ironically, the truthful picture of the UK's compulsory twice-annual OP warblecide treatment programme was that it was *introduced* in 1982, and only *one cow* on Jersey was ever subjected to the compulsory "formal" OP warblecide treatment.

When I attempted to sue the government for defamation/loss of income resulting from the bogus statements in this globally circulated publication, it pleaded "qualified privilege" of the expert committee and then spun out the legal communications beyond the one-year post-publication mark, thereby exempting itself from my claim.

And after broadcasting of the BBC *Correspondent* film, *Mad Cows and An Englishman*, which charted my investigations, the government tried to appease the mounting public interest by inviting me to resubmit an application for funding. After sitting on my application for a year and a half, they homed in on the most fastidious, nit-picking comments

For 18 years, my work and personal integrity have been subjected to a steady derisory trickle of ridicule and dirty tricks.

in the peer review appraisal, trumping them up as a sound scientific basis for rejection of the application. Immediately afterwards, the author of the most irrational, irrelevant critique was promoted to the government's expert TSE Surveillance Steering Committee—presumably as a reward! The UK government's tactics have thwarted the natural evolution of this promising new scientific perspective on TSEs.

A Multinational Masterplan?

The epidemiological and experimental evidence amassed to date points to the fact that TSEs are caused by a clear-cut combination of genetic and toxic environmental factors. So why do the authorities continue to treat these diseases as if they stem solely from hyperinfectious origins?

The reasons for such an irrational, Pavlovian-like stance on the part of the Establishment towards the environmental perspectives of TSEs probably hangs upon issues that are more to do with protecting academic egos, professional reputations and the vested interests of the TSE institutions and key advisers than with promoting sound scientific argument. Another reason must undoubtedly stem from the fear of massive compensation claims, should government-mandated use of OP warblecides or licensing of manganese additives be held accountable at the end of the day.

But it's imperative that we delve a bit deeper. Who are the key culprits that are currently capitalising on the fashionable scare stories which maintain that "BSE prions will exterminate us all"? Who are the people spinning out the propaganda myths that beef, lamb, venison, game and organic food (grown from animal manure) are contaminated with prions and are therefore unfit for human consumption?

The key scaremongers can invariably be traced to a mere handful of sociopathic pseudo-scientists who move between the upper echelons of government and corporation-controlled institutions. These incestuous experts are singing for their supper. They are on the payroll of the multinational chemical consortiums—corporations that have invested billions of bucks in researching and developing their genetically modified arable protein crops and the complementary package of pesticides to

go with them. They have bought up oceans of acres of dirt-cheap arable land across Eastern Europe, the Third World and North/South America and they are clearly attempting to destroy anyone competing for their global protein market. Prime targets are the small mixed-livestock farming sectors of agriculture which have traditionally been the mainstay of meat and milk protein production around the world.

The multinationals' preference for mono-arable cropping land use is easily understood, since each acre of grassland that is devoted to meat and milk production requires negligible inputs of pesticide/GM seeds in relation to each acre of farmland that is devoted to agrichemical-intensive arable protein production.

Despite the scaremongering over the "hyperinfectious" nature of the prion, a basic study of the epidemiological history of TSE clearly demonstrates that this disease does *not* originate from animal-to-animal contact or through ingestion of feeds contaminated with TSE brain material.

So why do the "experts" blatantly refuse to consult the down-to-earth

wisdom of the Icelandic farmers and vets who have been living with scrapie TSE for light years? When the first hint of scrapie symptoms emerge in their sheep, it is customary practice to slaughter the poor affected animal instantly, before it has had time to waste away, and eat the cooked flesh (brains and all!). And if scrapie or CWD (chronic wasting disease) can be passed on to humans via consumption, as the scientific authorities would have us believe, why have no cases of CJD erupted in these Icelandic sheep farmers? In fact, Iceland has only ever witnessed two cases of CJD in its entire medical history, and these victims had both hailed from the scrapie-free district in the far south of the country.

Despite the repeated failure of attempts to eradicate long-established TSE hotspot regions in Colorado and Iceland by enacting wholesale livestock slaughter/fallowing regimes across the cluster zones, governments are still adopting this same slaughter strategy as a first-choice means of control. But history has shown that TSEs will

invariably re-erupt as soon as fresh livestock are introduced back into the slaughtered-out areas—supporting the idea that the environmental causes of TSE are still well and truly wedded to the local food chain, irrespective of the slaughter programmes.

Such extreme "mammalageddon" measures do little more than remove the superficial evidence of the disease. They merely mislead the public into the illusory notion that TSE has been controlled—a good vote-catching policy for any government.

These are simple observations yet the global authorities are gripped by a manic mindset, having jumped on the assumption that TSEs stem

solely from hyperinfectious origins. For example, the recent discovery of new clusters of CWD in US deer has invoked an official overreaction of unprecedented proportion. A wholesale slaughter policy of indigenous deer herds has been enacted throughout all CWD regions across the USA, leaving many of the Native American tribes without their traditional source of dietary protein. Whilst studying in Wisconsin recently, I heard the story of a deer rancher who had retained some body tissues from one of his CWD-affected deer for independent post-mortem—only to find himself subjected to a gun-

point raid by wildlife officials.

These draconian slaughter measures are invariably promoted by the same hard-core cell of "expert" global advisers—the hysterics who dreamed up the hyperinfectious hypothesis in the first instance. By insisting on the burial or incineration of the evidence of their own control measures—for example, the thousands of carcasses of slaughtered animals—and then enforcing the fallowing of the land, the experts are placing themselves in a foolproof position where the success or failure of their control measures can never be properly assessed. In this respect, they can guarantee keeping their professional reputations afloat for the remaining lifespan of their careers.

But who is questioning the scientific reasoning for executing this final farcical solution on these poor creatures? The unilateral adoption of a policy of "totalitarian overkill" of a few million healthy animals across the world has been received with almost complacent acceptance. Such perverse and senseless "carry-ons" have sadly become the daily "non-stories" of our modern times.

The epidemiological and experimental evidence amassed to date points to the fact that TSEs are caused by a clear-cut combination of genetic and toxic environmental factors.

Reports pop up with ever-increasing frequency of so-called TSE precautionary control programmes being enacted after 1% or more animals in a flock or herd prove positive to the TSE genotype test—an endemic phenomenon that has existed for light years without ill effect. Among these control programmes were the annihilation of a herd of water buffalo in Vancouver and sheep flocks in Vermont, the slaughter of 400,000 cows in Germany and the erasure of thousands of scrapie-susceptible traditional sheep flocks and goat herds from the European hillsides—all healthy animals.

Along with the sad threat to the survival of some indigenous wild and domestic animal breeds, there is the threat of losing their valuable outputs of manure—the heartbeat of humus supply which protects the soil against the erosive forces of nature and feeds the fertility of the earth that ultimately sustains all life on the planet.

Furthermore, these slaughter measures are imposing the death knell on the survival of traditional peasant cultures—lifestyles which have evolved to be symbiotically dependent upon their livestock enterprises and the income they generate. We are saying farewell to one of the last bastions of our cultural identity: an holistic charm that flavours the landscapes which have been etched out by centuries of occupation under peasant family farms. That delicate, ethereal relationship that flows between the soil, crops, livestock and landscape is under threat, and along with it the aesthetically pleasing array of idiosyncrasies that go hand in hand with peasant lifestyles: the architecture, craft skills, folklore and dialects that have set the rich rustic outbacks apart from the homogenised synthetica of the city.

The all-out slaughter tactic betrays a total lack of interest in the cause, prevention or cure of this grotesque disease. The Establishment's current global agenda (*Agenda 2000*) to depopulate livestock numbers at whatever the cost is for reasons that have nothing whatsoever to do with (illusory) health risks to the human race, but more to do with envisioned profits from multinationally sourced GE/GM proteins.

I cannot help but feel that the global leaders have sold out to the multinational carrot. PR tactics used to promote "important" government policy increasingly capitalises upon some emotive scare story as a means of manipulating public mentality into conforming with the overall global agenda of the corporations. In much the same way as a war for Iraqi oil has been presented under the pretext of a morally justified war to rid Iraq of weapons of mass destruction, so the corporations' war to rid the world of livestock protein has been presented under the guise of ridding the world of the "health risks" posed by hyperinfectious prions.

The Broader Picture

The BSE debacle represents the mere tip of the iceberg of Establishment ineptitude and socio-eco-irresponsibility. It displays a clear-cut example of the far-reaching extent to which the talons of multinational monopolies can stretch to protect their global master-plan for the rapidly expanding "health and food-chain industry". Can we afford to allow this insidious mode of food-chain control to continue unabated and unregulated?

There is an increasing groundswell of public unease concerning our polluted environment and its unknown effects on our health and long-term survival. Mounting public suspicion is making transparent the array of so-called independent scientific experts and medical spin-

doctors who are called to advise governments and address the public on all aspects of the impact of chemical, metal, radioactive and electromagnetic pollutants upon our food chain.

This story returns us to the lessons that can be learned from the intuitive wisdoms of the people on the ground. At the same time it alerts us to the insidious and unscientific techniques which the incestuous clique of official "experts" employs to marginalise and discredit those who dissent from the totalitarian line. It shows us the ill-conceived basis upon which the Establishment's positions are truly founded, as well as the woeful degree of administrative complacency over issues which in most cases are matters of life and death for normal people.

Dispatches from the Front Line

My most recent eco-detective adventures across vCJD cluster zones in Japan, the USA, Sardinia and the UK involved my prospecting for a broader range of metals in TSE environments than I'd previously sought.

The analytical results have thrown up some interesting new possibilities in the quest for understanding the true causes of TSEs, unearthing high levels of the ferrimagnetic metal strontium as well as the usual high levels of manganese in the TSE environments, but normal levels in the adjoining TSE-free areas.

Much like manganese, strontium is emitted as a significant contaminant from volcanoes as well as from factories refining metals/steel or producing glass/dyes/explosives/paints/fireworks. It is used in surgery/dentistry, and as a bone/antler promoter in mineral supplements for humans and deer, etc. Strontium also competes with and replaces vacant calcium, magnesium and copper sites on proteins in the biosystem, so tests are currently in place to see if this metal can bind to copper-deprived prion protein like manganese.

The strontium facet offers a promising new theoretical possibility that can be

considered without disturbing the basic pathogenic template of this TSE causal theory—where the rogue ferrimagnetic strontium substitutes at the copper-depleted metal bonds on the prion protein, thereby impairing the protein's ability to conduct the vital "life force" electromagnetic energies derived from incoming light and sound.

It naturally follows that exposures to high levels of naturally occurring strontium could have triggered off the *traditional* strains of TSE, whereas exposures to the more reactive, radioactive strontium-90 could have caused the more aggressive, *new variant* strains of TSE in younger mammals.

Perhaps the strontium-90 emissions from the April 1986 Chernobyl nuclear disaster—the bulk of which at that time were deposited by the substantial rainstorms over northwestern Europe (e.g., UK, Ireland, Brittany)—were responsible for setting up susceptibility for mad cow disease in any cattle, humans or cats that had been simultaneously exposed to the copper-chelating, organo-dithiophosphate warble fly/headlice insecticides. The first reported case of BSE erupted in October 1986, whereas the almighty BSE epidemic that followed was largely contained within the key Chernobyl fallout zone.

It seems that several species of rogue ferrimagnetic metal—be it manganese, strontium or bismuth—may individually carry the potential to act as the TSE trigger in the copper-depleted brain. The resulting

This story returns us to the lessons that can be learned from the intuitive wisdoms of the people on the ground.

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TALKING WITH THE PLANETS

— by Nikola Tesla —

Collier's Weekly Editor's Note: *Mr Nikola Tesla has accomplished some marvellous results in electrical discoveries. Now, with the dawn of the new century, he announces an achievement which will amaze the entire universe, and which eclipses the wildest dream of the most visionary scientist. He has received communication, he asserts, from out the great void of space: a call from the inhabitants of Mars, or Venus, or some other sister planet! And, furthermore, noted scientists like Sir Norman Lockyer are disposed to agree with Mr Tesla in his startling deductions.*

Mr Tesla has not only discovered many important principles, but most of his inventions are in practical use: notably in the harnessing of the Titanic forces of Niagara Falls, and the discovery of a new light by means of a vacuum tube. He has, he declares, solved the problem of telegraphing without wires or artificial conductors of any sort, using the earth as his medium. By means of this principle he expects to be able to send messages under the ocean, and to any distance on the earth's surface. Interplanetary communication has interested him for years, and he sees no reason why we should not soon be within talking distance of Mars or of all worlds in the solar system that may be tenanted by intelligent beings.

At the request of Collier's Weekly, Mr Tesla presents herewith a frank statement of what he expects to accomplish and how he hopes to establish communication with the planets.

Collier's Weekly, February 19, 1901, pages 4-5

The idea of communicating with the inhabitants of other worlds is an old one. But for ages it has been regarded merely as a poet's dream, forever unrealizable. And with the invention and perfection of the telescope and the ever-widening knowledge of the heavens, its hold upon our imaginations has been increased, and the scientific achievements during the latter part of the nineteenth century, together with the development of the tendency toward the nature ideal of Goethe, have intensified it to such a degree that it seems as if it were destined to become the dominating idea of the century that has just begun. The desire to know something of our neighbors in the immense depths of space does not spring from idle curiosity nor from thirst for knowledge, but from a deeper cause, and it is a feeling firmly rooted in the heart of every human being capable of thinking at all.

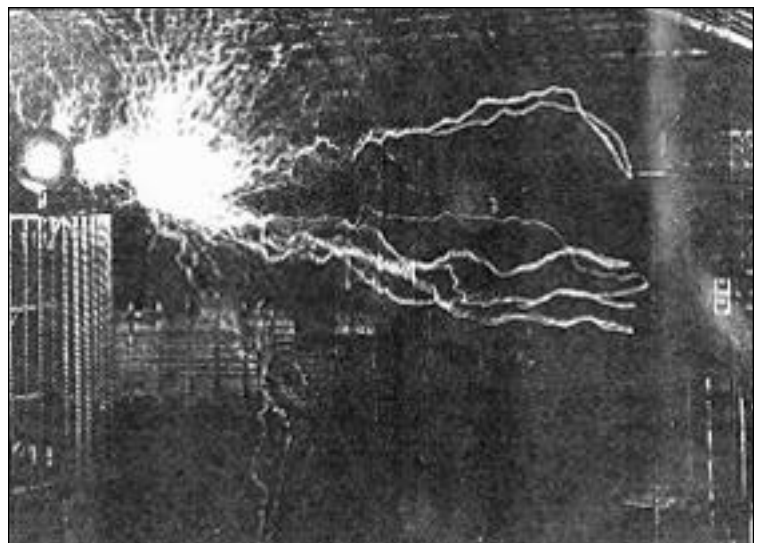
Whence, then, does it come? Who knows? Who can assign limits to the subtlety of nature's influences? Perhaps, if we could clearly perceive all the intricate mechanism of the glorious spectacle that is continually unfolding before us, and could, also, trace this desire to its distant origin, we might find it in the sorrowful vibrations of the Earth which began when it parted from its celestial parent.

But in this age of reason it is not astonishing to find persons who scoff at the very thought of effecting communication with a planet. First of all, the argument is made that there is only a small probability of other planets being inhabited at all. This argument has never appealed to me. In the solar system, there seem to be only two planets—

Venus and Mars—capable of sustaining life such as ours: but this does not mean that there might not be on all of them some other forms of life.

Chemical processes may be maintained without the aid of oxygen, and it is still a question whether chemical processes are absolutely necessary for the sustenance of organized beings. My idea is that the development of life must lead to forms of existence that will be possible without nourishment and which will not be shackled by consequent limitations. Why should a living being not be able to obtain all the energy it needs for the performance of its life functions from the environment, instead of through consumption of food, and transforming, by a complicated process, the energy of chemical combinations into life-sustaining energy?

If there were such beings on one of the planets, we should know next to nothing about them. Nor is it necessary to go so far in our assumptions, for we can readily conceive that, in the same degree as the atmosphere diminishes in density, moisture disappears and the planet freezes up, organic life might also undergo corresponding modifications, leading finally to forms which, according to our present ideas of life, are impossible. I will readily admit, of course, that, if there should be a sudden catastrophe of any kind, all life processes might be arrested; but if



Mr Tesla's experiment to illustrate the capacity of his oscillator for producing electrical explosions of great power. (*Collier's Weekly*)

NEWSCIENCE NEWSCIENCE NEWSCIENCE

the change, no matter how great, should be gradual and occupied ages, so that the ultimate results could be intelligently foreseen, I cannot but think that reasoning beings would still find means of existence. They would adapt themselves to their constantly changing environment. So I think it quite possible that in a frozen planet, such as our moon is supposed to be, intelligent beings may still dwell in its interior, if not on its surface.

Signalling at 100,000 Miles!

Then it is contended that it is beyond human power and ingenuity to convey signals to the almost inconceivable distances of fifty million or one hundred million miles. This might have been a valid argument formerly. It is not so now. Most of those who are enthusiastic upon the subject of interplanetary communication have reposed their faith in the light-ray as the best possible medium of such communication. True, waves of light, owing to their immense rapidity of succession, can penetrate space more readily than waves less rapid, but a simple consideration will show that by their means an exchange of signals between this Earth and its companions in the solar system is, at least now, impossible.

By way of illustration, let us suppose that a square mile of the Earth's surface—the smallest area that might possibly be within reach of the best telescopic vision of other worlds—were covered with incandescent lamps, packed closely together so as to form, when illuminated, a continuous sheet of light. It would require not less than one hundred million horse-power to light this area of lamps, and this is many times the amount of motive power now in the service of man throughout the world.

But with the novel means, proposed by myself, I can readily demonstrate that, with an expenditure not exceeding two thousand horse-power, signals can be transmitted to a planet such as Mars with as much exactness and certitude as we now send messages by wire from New York to Philadelphia. These means are the result of long-continued experiment and gradual improvement.

Some ten years ago, I recognized the fact that to convey electric currents to a distance it was not at all necessary to employ a return wire, but that any amount of energy might be transmitted by using a single wire. I illustrated this principle by numerous experiments, which, at that time, excited considerable attention among scientific men.

This being practically demonstrated, my next step was to use the Earth itself as the medium for conducting the currents, thus dispensing with wires and all other artificial conductors. So I was led to the development of a system of energy transmission and of telegraphy without the use of wires, which I described in 1893.

The difficulties I encountered at first in the transmission of currents through the earth were very great. At that time I had at hand only ordinary apparatus, which I found to be ineffective, and I concentrated my attention immediately upon perfecting machines for this special purpose. This work consumed a number of years, but I finally vanquished all difficulties and succeeded in producing a machine which, to explain its operation in plain language, resembled a pump in its action, drawing electricity from the earth and driving it back into the same at an enormous rate, thus

creating ripples or disturbances which, spreading through the earth as through a wire, could be detected at great distances by carefully attuned receiving circuits.

In this manner I was able to transmit to a distance, not only feeble effects for the purposes of signalling but considerable amounts of energy, and later discoveries I made convinced me that I shall ultimately succeed in conveying power without wires, for industrial purposes, with high economy and to any distance, however great.

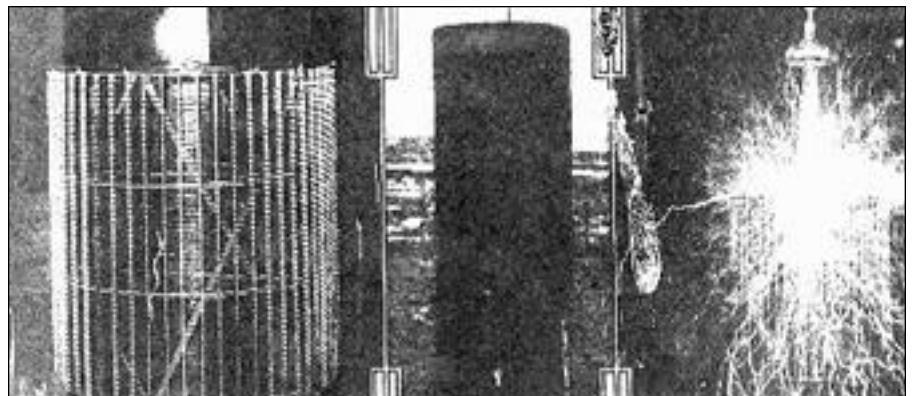
Experiments in Colorado

To develop these inventions further, I went to Colorado where I continued my investigations along these and other lines, one of which in particular I now consider of even greater importance than the transmission of power without wires.

I constructed a laboratory in the neighborhood of Pike's Peak. The conditions in the pure air of the Colorado Mountains proved extremely favorable for my experiments, and the results were most gratifying to me. I found that I could not only accomplish more work, physically and mentally, than I could in New York, but that electrical effects and changes were more readily and distinctly perceived. A few years ago it was virtually impossible to produce electrical sparks twenty or thirty foot long; but I produced some more than one hundred feet in length, and this without difficulty. The rates of electrical movement involved in strong induction apparatus had measured but a few hundred horse-power, and I produced electrical movements of rates of one hundred and ten thousand horse-power. Prior to this, only insignificant electrical pressures were obtained, while I have reached fifty million volts.

The accompanying illustrations, with their descriptive titles, taken from an article I wrote for the *Century Magazine*, may serve to convey an idea of the results I obtained in the directions indicated.

Many persons in my own profession have wondered at them and have asked what I am trying to do. But the time is not far away now when the practical results of my labors will be placed before the world and their influence felt everywhere. One of the immediate consequences will be the transmission of messages without wires, over sea or land, to an immense distance. I have already demonstrated, by crucial tests, the practicability of signalling by my system from one to any other point of the globe, no matter how remote, and I shall soon convert the disbelievers.



Supplying electrical energy through a single wire without return.

Transmitting electrical energy through the Earth without wire.

An electrical oscillator delivering energy at a rate of 75,000 horse-power.

NEWSCIENCE NEWSCIENCE NEWSCIENCE

I have every reason for congratulating myself that throughout these experiments, many of which were exceedingly delicate and hazardous, neither myself nor any of my assistants received any injury. When working with these powerful electrical oscillations, the most extraordinary phenomena take place at times. Owing to some interference of the oscillations, veritable balls of fire are apt to leap out to a great distance, and if any one were within or near their paths, he would be instantly destroyed. A machine such as I have used could easily kill, in an instant, three hundred thousand persons. I observed that the strain upon my assistants was telling, and some of them could not endure the extreme tension of the nerves. But these perils are now entirely overcome, and the operation of such apparatus, however powerful, involves no risk whatever.

As I was improving my machines for the production of intense electrical actions, I was also perfecting the means for observing feeble effects. One of the most interesting results, and also one of great practical importance, was the development of certain contrivances for indicating at a distance of many hundred miles an approaching storm, its direction, speed and distance travelled. These appliances are likely to be valuable in future meteorological observations and surveying, and will lend themselves particularly to many naval uses.

It was in carrying on this work that for the first time I discovered those mysterious effects which have elicited such unusual interest. I had perfected the apparatus referred to so far that from my laboratory in the Colorado mountains I could feel the pulse of the globe, as it were, noting every electrical change that occurred within a radius of eleven hundred miles.

Terrified by Success

I can never forget the first sensations I experienced when it dawned upon me that I had observed something possibly of incalculable consequences to mankind. I felt as though I were present at the birth of a new knowledge or the revelation of a great truth. Even now, at times, I can vividly recall the incident, and see my apparatus as though it were actually before me. My first observations positively terrified me, as there was present in them something mysterious, not to say supernatural, and I was alone in my laboratory at night; but at that time the idea of these disturbances being intelligently controlled signals did not yet present itself to me.

The changes I noted were taking place periodically, and with such a clear suggestion of number and order that they were not traceable to any cause then known to me. I was familiar, of course, with such electrical disturbances as are produced by the Sun, Aurora Borealis and Earth currents, and I was as sure as I could be of any fact that these variations were due to none of these causes. The nature of my experiments precluded the possibility of the changes being produced by atmospheric disturbances, as has been rashly asserted by some.

It was some time afterward when the thought flashed upon my mind that the disturbances I had observed might be due to an intelligent control. Although I could not decipher their meaning, it was impossible

for me to think of them as having been entirely accidental. The feeling is constantly growing on me that I had been the first to hear the greeting of one planet to another. A purpose was behind these electrical signals; and it was with this conviction that I announced to the Red Cross Society, when it asked me to indicate one of the great possible achievements of the next hundred years, that it would probably be the confirmation and interpretation of this planetary challenge to us.

Since my return to New York, more urgent work has consumed all my attention; but I have never ceased to think of those experiences and of the observations made in Colorado. I am constantly endeavoring to improve and perfect my apparatus, and just as soon as practicable I shall again take up the thread of my investigations at the point where I have been forced to lay it down for a time.

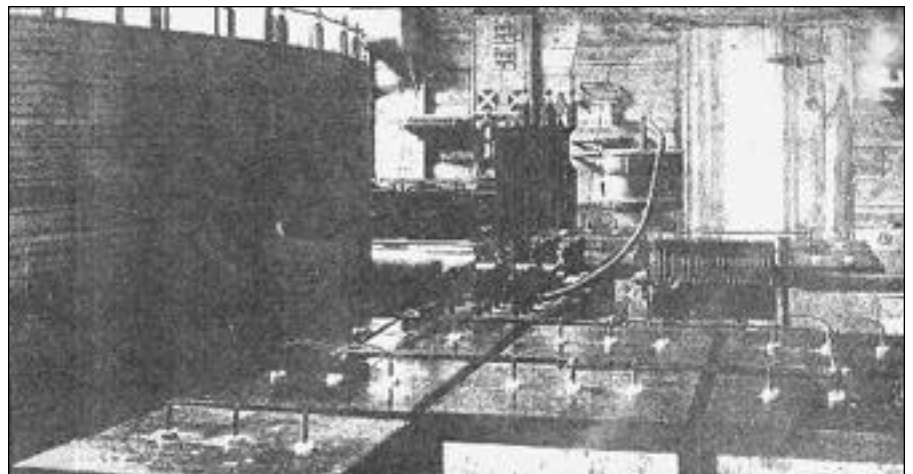
Communicating with the Martians

At the present stage of progress, there would be no insurmountable obstacle in constructing a machine capable of conveying a message to Mars, nor would there be any great difficulty in recording signals transmitted to us by the inhabitants of that planet, if they be skilled electricians. Communication once established, even in the simplest way, as by a mere interchange of numbers, the progress toward more intelligible communication would be rapid. Absolute certitude as to the receipt and interchange of messages would be reached as soon as we could respond with the number "four", say, in reply to the signal "one, two, three". The Martians, or the inhabitants of whatever planet had signalled to us, would understand at once that we had caught their message across the gulf of space and had sent back a response. To convey a knowledge of form by such means is, while very difficult, not impossible, and I have already found a way of doing it.

What a tremendous stir this would make in the world! How soon will it come? For that it will some time be accomplished must be clear to every thoughtful being.

Something, at least, science has gained. But I hope that it will also be demonstrated soon that in my experiments in the West I was not merely beholding a vision, but had caught sight of a great and profound truth.

(Source: *United States Early Radio History website*, <http://earlyradiohistory.us/1901talk.htm>)



Photographic view of the essential parts of the electrical oscillator used in Mr Tesla's experiments. (From *Collier's Weekly*, February 19, 1901)

INCANDESCENT LIGHT THE HEALTHIER ALTERNATIVE?

Since incandescent light really is a higher-quality light and so many people dislike fluorescents, why are we still being persuaded to use more and more fluorescent light and less and less incandescent?

Part 2 of 2

by Inger Lorelei © 2003

Email: ingerlorelei@tiscali.se

Lighting at Home

The lighting advice given in home decorating books and magazines is usually very good, except on two accounts: uplighting and the so-called "energy savers". When the compact fluorescent (CFL) or "energy saver" was introduced in the late 1980s, lamp manufacturers enlisted the aid of energy authorities and producers, environmental authorities and organisations, and large companies such as IKEA to get as many people as possible to replace their top-quality incandescent bulbs with these ridiculously expensive class II CFLs—which initially cost over 30 times more (and, as with some of the top brands, still do). And so this very unfair and persistent campaign against the light bulb was launched and is still being kept up by a steady stream of ads, brochures, special offers, articles and websites that capitalise heavily on our growing concern for the environment and for our own personal economy.

Usually a few simple catch-phrases are used—often intermingled with useful lighting tips and information about other lamp types—and are repeated over and over again by so many different, seemingly independent, unconnected and reliable sources that one can easily get the impression that they are actually true. For example:

1. The first argument is that the CFL lasts 8, 10, 12 or 15 times longer than a standard 1,000-hour GLS (general lighting system) bulb. First of all, if you really need a long-life lamp at home, there are GLS lamps with thicker tungsten filaments that are also designed to last 10,000 hours (although at a slight reduction in output), so long life is not unique to CFLs. Secondly, a test by the Swedish Consumer Agency (2000–2001) revealed that surprisingly few "energy savers" really did function for as long as they claimed. Of one brand that was far from inexpensive and which promised 8,000 hours, not a single lamp lasted longer than 663 hours! And even though many of the pricier top-brand CFLs burned as long as stated or longer (but very much weaker), not all of them did. Of the most expensive lamp type meant to last 12,000 hours, half had gone out by 8,000 hours!

2. The CFL is also said to produce a light that "looks just like incandescent light". Although in recent years there really has been an improvement in some of the least efficient models, the (composite) light from most CFLs is still more of a pinkish white.

3. The third and main claim that has been chanted from the start is that the CFL gives "five times more light" and thereby "saves 80% energy" (not 80% of your total energy consumption, of course, but of the tiny part of it that light bulbs use). Since lamp manufacturers must be well aware that most CFLs actually *don't* give off five times more light, an "up to" was later inserted in this mantra (some replaced it with "four times more"), but by then the catch-phrase was already so well established that it is now often (mis)taken for a fact.

To see for yourself that CFLs don't give five times more light, you only need to compare, for example, a 60-watt GLS with the recommended 11- or 12-watt CFL that is meant to replace it, and it will be obvious that the latter is less bright. Even the manufacturers' own catalogues confirm that while a good 60-watt GLS gives 730 lumens (lm), the most efficient (and ugly) naked-tube CFL only gives 600 lumens at 11 watts. In globe- or bulb-shaped models (advertised as giving "four times more light"), the outer bulb further reduces the amount of light that gets through to only around 450–500 lm, according to the catalogues. And the abovementioned test revealed that although the three top-brand lamps really did give as much light as promised (in the beginning), most other brands did not. The worst lamps produced only 214 lumens!

This test also confirmed that "energy savers", just like other FL (fluorescent) and HID (high-intensity discharge) lamps, lose output as they age, most of it during the first 2,000 hours.³ After 8,000 hours, the light from some models was reduced by as much as 40%.⁴

This of course means that to get as much light as from a GLS, you need to buy a CFL that has a higher wattage than recommended. That way, if you save anything at all it is quite a bit less than what the manufacturers claim and, even then, this is only if you invest in one of the more expensive quality lamps—and are lucky enough to get one that really gives as much light as it says it will and does not lose too much luminance too quickly or expire before it has saved energy beyond what it cost you to buy it!

4. The heat from light bulbs is always pointed out as a problem. However, this is so only in countries, seasons and places that are already more than hot enough, requiring the excess heat to be ventilated away. In cooler climate zones, this can be an asset instead and help keep heating bills down,⁵ thereby making the difference between using incandescent bulbs and CFLs even smaller.

5. To make the CFL seem environmentally friendly despite the uncomfortable fact that it contains mercury, the incandescent bulb is very unfairly and incorrectly made to seem like it causes more mercury pollution, even though it doesn't contain any in itself. This argument firstly assumes that the incandescent light bulb really does use so much more energy (which it doesn't) and, secondly, it assumes that that energy comes from mercury-polluting coal-fired power plants only!⁶ Instead of trying to scapegoat the poor light bulb, would not a more logical solution be to stop using coal?

So why are so many energy authorities and producers so extremely eager for us to ruin the nice, relaxing atmospheres in our homes with potentially unhealthy CFLs that really don't save that much at all? Why do they want to do this, when light is something so essential to life and when incandescent light actually costs ridiculously little—usually only a measly few per cent of a household's total energy cost? (Most of that cost goes towards heating and cooling/heating water.)

If it's energy they want us to save, why are we constantly being encouraged to buy more and more unnecessary gadgets with which to pamper and amuse ourselves? Why not ask us to save on some of those instead? Or why not speed up the development of those alternative energy sources we've been promised for so long? Is it just manufacturers wanting to make a profit, and much ignorance on the part of everyone else who parrots their exaggerated claims without checking if they are true or not?

Or is there some other motive behind this well-coordinated and persistent campaign that seems to aim at having incandescent light removed from private use altogether—such as making it even more effective in creating an aura of glamour around certain products, people, places and events, the more rare it becomes?

Direction and Distribution

Anders Liljefors, professor in architectural lighting at the Royal Institute of Technology, Stockholm, was the first to actually confirm my perception of incandescent light as being of a higher quality. To create good lighting environments, he suggests that we look at natural light for inspiration without having to copy it exactly. One of the reasons why the light on a cloudy day feels so dull and gloomy is not only that it is lower in luminance and cooler in colour, but also that it is evenly diffused in all directions—whereas sunlight brightens everything up and also creates shadow, movement and sharp contrasts between shadow and light.⁷

Fluorescent light often looks extra dull and uninviting when coming from a long tube (a very unnatural shape for a light source) that spreads the light evenly across the room, eliminating all natural shadows. But isn't it possible that shadow and darkness are just as important for optimal health as enough of the right kind of light?

When planning the lighting, it is very important to choose the right kind of light fittings (or luminaires, as they are meant to be called now) to get the effect that you want. To create more shadow and contrast, for instance, you need the lighting to be directional and luminaires that are designed for the purpose.

Instead of a linear luminaire with a plastic diffuser, or a globe light that scatters the light in all directions equally, directional lighting concentrates it in one direction (like a spotlight) or sometimes two (like many wall, table and floor lamps that let most of the light out underneath but also let some out through the top). The fewer, smaller and brighter the light sources and the narrower the beam angles, the sharper and more dramatic the effect. With more and bigger lamps which have wider beam angles and are placed closer together (so that the beams meet or overlap), the effect is both softer and brighter, more resembling the evenly lit room but still having a much more natural look and feel.⁸ Concentrating the light also increases its brightness (in that direction) without the use of more electricity—especially if the lamp or luminaire has a polished aluminium reflector that projects the light outwards.

The direction of the beam is also important. Light falling diagonally downwards, like the daylight coming in through windows, accentuates structures and often looks more natural than light coming straight down from the ceiling.⁹ Light coming from only the ceiling can also make a room feel quite gloomy. Try using more lights and place them lower, adapting their position, direction and luminance to the main activity/activities in the room. Here are some more tips:

- For places where you lie or sit down, such as bedrooms, bathrooms, living rooms, waiting rooms, schools,

offices, trains and buses, I suggest directional lights that are placed so that most of the light falls just below eye level when lying or sitting and are not too bright, unless you're reading or doing some specific task in that space.

- If you are reading or are working with your hands, make sure to get enough light right there over your reading/working space. The more precision the task requires and the older you are, the more light you need in order to see well. Even if a 40- or 60-watt bulb might be enough for a child or teenager, at 60 years of age you may need seven times as much light.¹⁰ Since most desk and reading lamps don't take more than a 60- or 75-watt bulb (or a 20- or 35-watt low-voltage halogen), consider using several of them combined, or even one or two 150-watt mains voltage halogen floodlights of the type mentioned above.

- Uplighting is usually not a very good idea, first of all because it feels odd with light going in the "wrong" direction, so to speak, and secondly because it has to travel all the way up to the ceiling before some of it comes down in a very bleak, diffused and useless form. If you have a wall-mounted uplighter at home, try turning it upside down and see for yourself if it doesn't both look and feel better when the light is directed downwards instead. One of the few situations in which indirect lighting such as uplighting can be practical is when you want to avoid glare and reflection in television and computer screens,

Is there some other motive behind this well-coordinated and persistent campaign that seems to aim at having incandescent light removed from private use altogether?

and the light source should then be placed closer to the ceiling in luminaires designed for the purpose. A more appealing alternative could be spotlights directed at the walls. Whether the light comes from desk, walls, ceiling or windows, the light source should not be seen in the screen—that's the most important thing.

- For areas that you just pass through or spend little time in, e.g., corridors, garages, etc., I suggest replacing any ceiling tubes with wall-washers (downlights placed close to the walls) or with wall sconces. These should be placed at medium height so that most of the light falls just below the eye level of those who are shortest. Also, the light should not be unnecessarily bright.

- Bright lights placed higher so as to illuminate larger areas I find appropriate mainly where/when you have to be physically active and at the same time have a need to see what you're doing, such as when cleaning, redecorating or building something.

With all aspects combined, you could say that the cooler, the brighter and more evenly distributed the light and the higher up it is placed or directed to, the more impersonal the effect. The warmer, the dimmer and the more concentrated the light and the lower down in the room it is placed or directed to, the more intimate and sophisticated the atmosphere. To see a beautiful example of the latter, check out the mainly incandescent and directional lighting in the TV series *The West Wing* (and its real-world counterpart).

It seems that during the last decade or so, awareness of how light can be used to create various moods and impressions has increased considerably. Unfortunately, though, it seems that this knowledge is often used to manipulate—when, instead, it could be applied on a larger scale to promote the well-being of everyone.

Commercial Lighting

When the lighting in shops, restaurants and other commercial facilities is planned, there are certain guidelines issued by the lighting industry, besides the standard regulations concerning ergonomics and energy efficiency, that architects and lighting engineers are encouraged to follow.¹¹ These guidelines can be summed up thus:

- For supermarkets, drug stores, gas stations and other stores that you are compelled to visit often because they sell things you really need, guidelines recommend light that is mainly fluorescent, of medium quality, evenly distributed, cool-white and very bright (possibly supplemented by a few high-pressure sodium discharge lamps over the meat counter, as their extra-warm colour makes meat and salmon look more red). Very bright FL of poor or medium quality is also often used in discount stores to enhance the impression that one is really getting a bargain. And in sports, electronics and hardware stores and departments designed mainly to attract men (as if women might not shop there, too), the colour of both the light and the interior design is usually much cooler and brighter than in those that target women specifically.

- For smaller shops with personal service, medium-range fashion boutiques, department stores and shopping malls, where many things are displayed that you may want but don't really need, more appealing lighting solutions are recommended. These places generally have fewer, warmer, better-quality fluorescent lights that are placed higher and more inconspicuously in the ceiling, often in combination with halogen or good-quality HID spotlights. These spots are placed lower to accentuate areas such as the fashion, perfume and interior

decorating departments that are meant to seem glamorous but affordable, thereby encouraging the customer to buy a bit more than she or he had originally planned.

- For more exclusive shops, restaurants, etc., where it is taken for granted that you are willing and able to part with large amounts of money, guidelines recommend light that is warm, dim, mainly directional with high contrast and of top quality. So if you go to a jewellery store, a designer fashion boutique, an exclusive hotel or casino, a car showroom, a private clinic or spa, you are likely to find the lighting to be very soft, pleasant and inspiring. You'll notice more incandescent light, including romantic downlights and little dazzling halogen spots which, when placed to highlight certain products, make these appear even more exclusive and attractive than they really are. Theatres, museums and art galleries are also often very beautifully lit.

Clearly, this indicates that there really is an awareness within the lighting and commercial community of the fact that the incandescent bulb has some unique and very desirable qualities, or they would not put so much effort into creating something as similar as possible to incandescent light, use it to sell the most expensive goods or let it flow in such profusion at Christmas-time to add to the "Christmas spirit" and, of course, to sales.

But although a majority seems to be sticking to these rules, there are

those who don't. Increasingly, supermarket owners, for example, seem to have realised that customers might want more pleasant lighting when buying groceries, too. Hopefully, more will follow. And since many foods are known to be affected by light—usually adversely once they are harvested—perhaps it might be good for the food, too, if the lights were less bright and of a better quality, not only where the food is sold but also where it is processed, packaged and stored.

Lighting at Work

Even though attractive halogen light is becoming more widely used in work-

ing environments, there, too, incandescent light often seems to be reserved for those with the highest income and status. Even in the most beautifully lit shops, restaurants and hotels, etc., the lighting in staff and storage areas still tends to be the same cool, ugly and often unnecessarily bright FL so as to emphasise the constructed differences between customer and employee and between leisure and work.

But is this really necessary? Why are most of us not allowed to work and feel comfortable at the same time—and perhaps even get the job done better because of it, too, with less sick-leave, better concentration and fewer errors due to stress? Are employers afraid we will feel too relaxed and not work hard enough if we're not constantly kept in a keyed-up mode? Or is it that enjoyable lighting is to be granted to us only when we are willing to pay for the expensive goods and services that come with it?

Recommendations for Offices

In studies on lighting conditions preferred in offices, Jennifer Veitch and Guy Newsham (2000), at the Institute for Research in Construction, National Research Council of Canada, found that most people would like to have windows, preferably with blinds or curtains, but they also wanted to have electric lighting and be able to adjust both the position and angle of the lighting and turn the lights on and off during the day. (Very reasonable wishes, aren't they?) Since the participants were very satisfied when allowed to adjust the lighting to

Very bright FL of poor or medium quality is also often used in discount stores to enhance the impression that one is really getting a bargain.

suit their particular preference, and as most of them chose luminance levels consistent with current recommendations or lower, Veitch and Newsham recommend lighting solutions that are as flexible as possible, with dimmable lights, local switching and wiring that allows one to move things around.^{12,13}

Giving each individual as much control over lighting conditions as possible sounds like a very good idea, since lighting requirements may vary considerably depending on a person's age and the type of activity. Too much light at the wrong time or in the wrong place can be just as irritating and uncomfortable as too little. Also, it seems there are big differences as to individual preferences. Even though more than half of those asked by Veitch and Newsham liked to work in a uniformly bright room, 17% preferred to have most of the light on the desk and the rest of the room more dimly lit and 7.5% liked an even darker room.¹⁴

One study by Kellner et al. (1997) also found that agoraphobic patients felt most comfortable with luminance levels that were much lower than those preferred by healthy controls.¹⁵ Another study by Veitch and Newsham (1998) showed women to be somewhat more sensitive to bright light than men were.¹⁶

I would of course also like to see incandescent light included as an option, especially since so many seem to dislike FL. Unlike what many seem to think, it wouldn't have to cost very much more to have incandescent instead of fluorescent light at work, if you used the most effective halogen spotlights and floodlights and used only as much light as needed where and when it is needed.

FL tubes are equally bright all day and everywhere, and are not quite as efficient as is usually claimed. First of all, if they are powered by conventional ballasts, those ballasts use about 20% of the original installed effect. Secondly, most tubes as they age lose much of their output (which is then turned into heat), especially if not cleaned regularly. After three years in a relatively clean environment, the loss of light may be as much as 50%, even though the tubes still use the same amount of electricity. Plastic diffusers also steal some of the light and tend to make it too hot for the tubes to function optimally. The same goes for fixtures with four tubes.¹⁷

So let's say you have a standard class III tube that is said to give 50 lumens/watt. This sounds like a lot more than an incandescent bulb that gives about 14 lumens/watt, or a halogen that may give something like 22 lm/w, doesn't it? But then take away 20% right from the start, a bit more if you have a plastic diffuser, and then another 10–15% every year, and the difference is significantly smaller.

For those who might still prefer FL, warm-white HF-powered slim class-II tubes, which give up to 100 lm/w in the beginning and do not lose so much light as they age, may both save a lot of energy¹⁸ and improve the quality of the light to a level that can at least be acceptable to work in if you're not too sensitive or choosy, especially when used in modern two-tube luminaires with deep parabolic reflectors. Warm-white metal halide lamps in recessed downlight fixtures is another energy-efficient and fairly attractive alternative.

Industrial and Outdoor Lighting

Ever since FL and high-intensity discharge (HID) lamps were forced on the public on a massive scale in the 1950s and 1960s, there has been this "tradition" in lighting guidelines to recommend FL or HID lights of low quality for places where as much light as possible is

needed for the lowest possible cost and where quality is deemed of little or no importance, e.g., for factories, warehouses, power plants, mines, streets and highways, tunnels, garages, etc.—as if such places aren't usually unpleasant enough without the light adding to it! Even though better-quality lamps have been introduced during the last decade or so, these are mostly used indoors in commercial locations and situations.

The most common types of HID lamps are:

- **Mercury lamps.** These are high-pressure lamps (as opposed to ordinary FL tubes which are low-pressure mercury lamps) and produce a spooky blue-white light of poor quality and relatively low efficacy compared with other HID lamps. Why they are still used as streetlights is a mystery. In my opinion, they really ruin the nice atmosphere of old cities and villages, and certainly don't do anything for the more modern ones, either.

- **Metal halide lamps.** These are about twice as effective as the mercury lamps and contain other metallic elements besides the mercury that give them a bright white or silver-white light with moderate to "accurate" colour rendering. The best ones are often used in shops, convention halls and stadiums. They are also used in film and TV studios, replacing the previously used tungsten halogen lamps that were always appreciated for the way they made colours come alive but unfortunately also produced a lot of heat.

- **Low-pressure sodium (LPS) lamps.**

These are very bright orange, budget lights with zero colour rendering, since they only reproduce a single wavelength. They used to be, and in many places still are, used to illuminate tunnels, highways, etc. If prolonged exposure to monochromatic light of warm colour has the same effects on humans as on animals,¹⁹ this is the light we should avoid staying in for too long and stop subjecting the nearby wildlife to in rural areas.

The most common excuses for using these LPS lamps are that they give up to four times more light per watt than the

mercury lamps, that colour rendering doesn't matter outdoors (I don't understand why it shouldn't), and that the eye cannot distinguish colours at low lighting levels. I disagree particularly with that last statement, since those levels at which the eye can no longer distinguish colours are so much lower than those created by LPS lights. Perhaps there may be a biological reason for these differences in opinion, since female eyes are usually better at distinguishing colours, whereas men instead have more rods in their eyes and see better in near darkness.²⁰

My experience when driving on highways lit by LPS lamps is that the light is tiring on the eyes because it's so unnatural to see only a single colour for a lengthy time. There are safety implications, too, as you really don't see things as clearly in coloured light as in a white or warm-white light with good colour rendering capacity.

- **High-pressure sodium (HPS) lamps.** Standard HPS lamps have about the same output as metal halide lamps and produce a bright peach-coloured light of poor to moderate quality that I find acceptable along highways but which looks unnatural in cities, villages and suburbs. There are now HF-powered HPS lamps with improved colour rendering that produce a more attractive and fairly incandescent-like light, but since they are slightly less effective than other HPS lamps and require specially designed luminaires, they are usually reserved for lighting picturesque tourist areas at night and places where the more affluent and influential work or reside.

Another study by Veitch and Newsham (1998) showed women to be somewhat more sensitive to bright light than men were.

Sometimes they are used in shops, but indoors the slightly peachy-white colour does not look quite as good as it does outdoors.

If quality had a higher priority and we had an energy system that could support it, we could of course replace all of the above with halogen floodlights and thereby get a bright, warm-white, crystal-clear light that does not become weaker or change colour as it ages. These are now usually only used at building sites or in the odd parking lot. Some people also have them as outdoor lighting at home, which I think is a very good idea, especially if used with IR detectors that turn them on only when needed. That way, you save energy without having to compromise on quality.

Another energy-saving option that is now starting to gain a foothold in the market is the use of solar-powered streetlights. Unfortunately, this technology so far only allows for the use of cool-white FL and orange LPS lamps, and, if one is willing to pay more, the better-quality warm-white HPS lamps that require special ballasts.²¹ It still seems like a huge step in the right direction, though, and hopefully the quality of the light will eventually be improved, too.

Another problem with outdoor lighting is what some call "night sky pollution", which prevents many of us from seeing the stars due to the excess light from unnecessarily bright night-time illumination of streets, buildings, billboards, convenience stores, etc. According to an excellent article by Alex Wilson,²² light pollution may also pose more or less serious threats to certain animals and trees, besides causing a huge waste of electricity and money and often being counterproductive when it comes to safety and crime prevention. What dark-sky advocates recommend is to: control glare by requiring luminaires that are shielded to direct light downwards; limit the height of luminaires relative to the property boundary, thus preventing light trespass onto adjoining properties; require downwards directed top-lighting for advertising signs that are externally illuminated; and prohibit certain types of advertising lights, such as searchlights and laser lights.²³

Car Headlights

Unfortunately, it seems that the top-quality halogen light in car headlights is being phased out, too, with more and more of the new cars produced now coming equipped with fluorescent xenon light from micro metal halide lamps. These produce a very bright and cold violet-silver-white light that is meant to improve driver visibility and traffic safety, but which I find very glaring and distracting when meeting it on the road due to the unnatural colour that keeps shifting as it approaches.

Lighting, Hypersensitivity and Hyperactivity

From around seventh grade I was starting to become consciously aware of feeling tense, restless, unfocused and uncomfortable under the cool, harsh light in school classrooms, on subway trains, in streets etc., and being able to relax, concentrate and feel comfortable only in the much softer light at home or in other people's homes—i.e., in incandescent light, although at the time I did not know the technical difference. And I am not alone in reacting like that. This is how another sensitive person describes it:

"Fluorescent lights drive me batty. In school I used to get into trouble on purpose so I could get sent out into the hall. The lighting in the hallways was not fluorescent. I would drag my entire school desk out into the hall. I would act up and do just about anything to get

away from those damned lights. I could actually do the work once I got out of the classroom."²⁴

So what is it, then, that causes FL to have this effect on some people? Flicker (and sometimes disturbing noise) is something many people seem to be aware of consciously. But apart from that and the unnatural colour and discontinuous spectrum, the radiowave, X-ray and possible mercury vapour emissions already mentioned, it may also be that it is too bright for that person, especially if it shines from above the head—because this, in my experience, tends to activate the whole body. When sitting down in class or at work, you want your body to be relaxed and your mind to be alert—not the other way around, right? Besides using only incandescent light—which really can help put you into a state of relaxed concentration—it may also help if most of the light is concentrated on the work area or the teacher or whatever one is meant to focus on, and if the rest of the room is dark enough and, ideally, quiet enough not to scatter your attention. That is why they light theatres, concert halls and cinemas that way.

As a naturally sensitive person myself, I also feel that FL is a dead light that actually steals energy from the body and that it may turn one's subtle energy centres off, thereby inhibiting the flow of bio-energy (also known as *chi*, *prāna*, etc.) needed for staying healthy and functioning optimally.

On the other hand, incandescent light—possibly because fire is a living element just as earth, water and air are—seems instead to assist the energy flow, facilitate the connection with one's inner self, and even open centres that previously have been turned off—especially the heart centre which, at least in sensitive individuals, appears to need some form of firelight to blossom.

Perhaps this is the reason why anthroposophical architects—who generally seem to be more aware than usual of what is healthy, beautiful and supportive for both consciousness and life, and mainly use energy-creating things like natural materials, flowing water and colour-washed walls—also tend to prefer

using incandescent light (or sometimes even candlelight), especially in health clinics and schools.

Try for yourself and see how you feel and function under different types of light. If you, too, feel more or less turned off by FL but still have to spend much time in it, for example at school or at work, even adding as little as one single incandescent lamp placed fairly low and close to the body may be enough to keep the heart centre open and give a little energy.

And although it seems that some studies (by Mayron et al., 1974; Ott, 1976; Wolfarth and Sam, 1982) could have indicated a positive effect of "full-spectrum" fluorescent light (FSFL) on hyperactivity in children, these were not all conducted perfectly, according to the review by McColl and Veitch. Other, better-controlled studies (Ferguson and Munson, 1987; Norris, 1979; Schulman, 1989) have not managed to find clear, replicable effects from using FSFL compared with other FL lights, so the matter is still subject to some controversy.²⁵

Personally I find class-I (FSFL) tubes easier to bear than poorer-quality ones, if they are of a warm-white instead of a blue-white colour. But even if "full-spectrum", I still cannot relax and concentrate in it as I can with incandescent light and natural daylight. This might possibly be due to the fact that all types of FL seem to increase beta activity in the brain, according to a study by Küller and Wetterberg (1993) that compared the effect of both dim

Try for yourself and see how you feel and function under different types of light.

and bright class-II FL and class-I FSFL. They found that beta brainwaves increased during the afternoon under all lighting conditions.²⁶

There are, of course, numerous reasons for restlessness, difficulties in concentrating, etc., besides environmental factors like lighting, noise, chemicals, diet, and so on. Many adults who have been labelled with ADHD (attention deficit hyperactivity disorder) have come to the conclusion that their particular problems are due to having a gifted and spirited personality type, and/or having an atypical learning style such as being a visual-spatial or a tactile learner, and/or being a highly sensitive person (HSP) whose extremely delicate and finely tuned nervous system easily gets overwhelmed by external impressions, thereby making it hard for that person to concentrate. Or it may be that the material that one is required to focus on is just too boring, incomprehensible, untrue or irrelevant! (Anyone wishing to learn more about these alternative views on ADHD might find inspiration on the following websites: <http://borntoexplore.org/sitemap.htm>, <http://pages.prodigy.net/redstar01/index-1.htm>, and <http://www.hsper-son.com/>.)

Lighting for the Youngest

When welcoming a new life into this world, I would as my first choice use only candlelight or, if not possible, very soft GLS. I would take care not to expose the baby to fluorescent light at all, and shield the baby if passing an FL light source was unavoidable.

And just as one might have figured this out simply by using empathy and common sense, a study shown on a *Nova* science programme on TV (spring 1998, I think) found that babies born prematurely fared much better when kept in conditions as close to womb-like as possible, with very dim light and whispering nurses who are not wearing perfume—so as not to overstimulate the babies and draw their atten-

tion outwards before they are ready. If this is not the practice in your hospital, I strongly recommend that you make sure it will be, soon, and that the dim lights used are incandescent and not fluorescent. This may be more important for these babies' chances than we can imagine.

Lighting for your Pets

Since most animals seem to have even more delicate senses than humans do, is it not possible that they, too, are suffering immensely under FL without being able to tell us about it? Patrick Lindahl even suggests that animals may see flicker that we don't and may perceive an FL tube as if it were a strobe lamp.

With all the stress, abuse and indignities that we are already subjecting so many animals to, do we really need to torture them with bad lighting on top of it? If you yourself own or work in a place where animals are kept, why not try bright incandescent light and/or real daylight in the daytime and darkness or very soft incandescent light at night and see how the animals seem to feel?

Making an Informed Choice

If you didn't already know much about light and lighting, it is my hope that you are now in a position to make a more informed choice. However, since there seems to be so much variation between individuals as to what type of lighting solutions are optimal, my final suggestion is that you try various types of lamps yourself and see what works best for you. If you don't mind using FL light, then it's probably okay for you. And if you belong to the minority who doesn't like electric light at all but prefers candlelight only, then that's probably just what you need.

So, if you just pay attention to how your body reacts under various types of lighting, I believe you each have your own best guide.

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HOLOCAUST OF GIANTS

The Great Smithsonian Cover-up

Skeletal remains of giants buried in the ancient earth mounds of North America were described in 19th-century documents of the Smithsonian Institution, but the physical evidence either has perished or been hidden from public view.

by Ross Hamilton © 2001

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Reprinted from his Serpent Mound Mysteries website at:
<http://greatserpentmound.org/articles/giants3.html>

Computer Images
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It's probably better that so few of the ruins and remains were tied in with the Smithsonian because they give good reason to believe the ending of the Indiana Jones movie—a great warehouse where the real secrets of earth history are buried.

Vine Deloria, Jr, noted Native American author and Professor of Law Emeritus
(Personal communication, May 2000)

Modern-day archaeology and anthropology have nearly sealed the door on our imaginations, broadly interpreting the North American past as devoid of anything unusual in the way of great cultures characterised by a people of unusual demeanour. The great interloper of ancient burial grounds, the 19th-century Smithsonian Institution, created a one-way portal through which uncounted bones have been spirited. This door and the contents of its vault are virtually sealed off to any but government officials. Among these bones may lie answers not even sought by these officials concerning the deep past.

The first hint we had about the possible existence of an actual race of tall, strong and intellectually sophisticated people was in researching old township and county records. Many of these were quoting from old diaries and letters that were combined, for posterity, in the 1800s from diaries going back to the 1700s. Says Deloria on this understanding:

"Some of these old county and regional history books contain real gems because the people were not subjected to a rigid indoctrination about evolution and were astonished about what they found and honestly reported it."

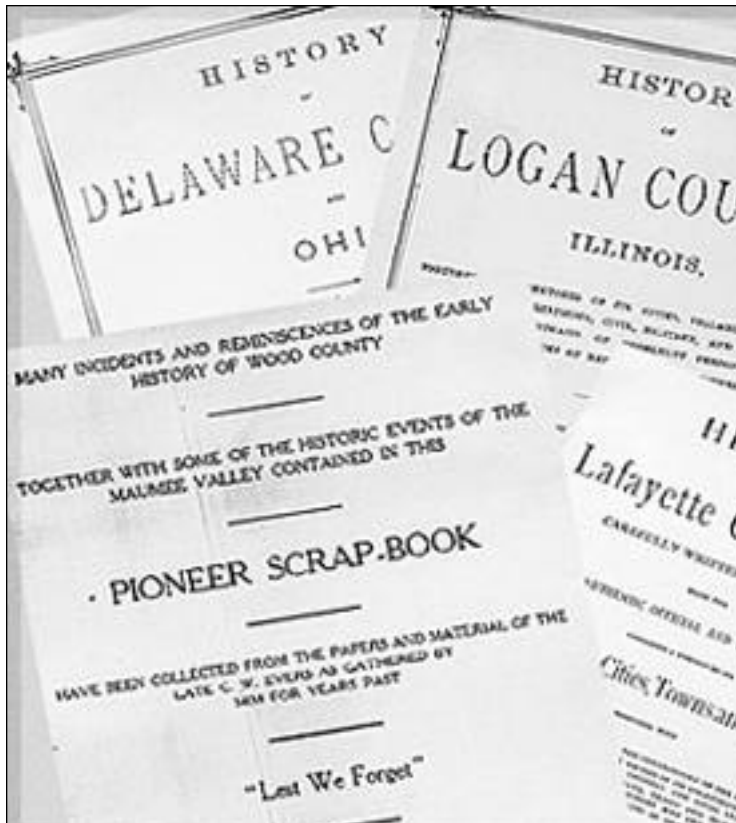
Some time before archaeology came to subscribe the general public to its view of pre-history—generations prior to Darwin's troublesome theory—the pioneers thought that some of the earthworks were as ancient as could be concurrent with human habitation in America. Some among those early settlers exercised their pens, assured that the earthworks were not built by the direct ancestry of the native people living in the historical period but, rather, were constructed in a more remote era encompassing a different social order. They compared the "Mound Builders" with the "Indians", clearly discerning the former as belonging to an earlier time and possessing a different fate or destiny from the latter.

"Evidence for the occupation of this region before the appearance of the red man and the white race is to be found in almost every part of the county, as well as through the northwest generally. In removing the gravel bluffs, which are numerous and deep, for the construction and repair of roads, and in excavating cellars, hundreds of human skeletons, some of them of giant form, have been found. A citizen of Marion County estimates that there were about as many human skeletons in the knolls of Marion County as there are white inhabitants at present!"

The History of Marion County, Ohio
(Compiled from past accounts; published in 1883.)

"Mastodonic remains are occasionally unearthed, and, from time to time, discoveries of the remains of Indian settlements are indicated by the appearance of gigantic skeletons, with the high cheek bones, powerful jaws and massive frames peculiar of the red man, who left these as the only record with which to form a clew to the history of past ages."

The History of Brown County, Ohio
(Compiled from past accounts; published in 1883.)



Title pages of the early county and pioneer history books often included phrases like "Carefully Written and Compiled" and "Lest We Forget".

"She said also that three skeletons were found at the mouth of the Paw Paw Creek many years later, while Nim (Nimrod) Satterfield was justice of the peace. Jim Dean and some men were digging for a bridge foundation and found these bones at the lower end of the old buffalo wallow. She thought it was Dr Kidwell, of Fairmont, who examined them and said they were very old, perhaps thousands of years old. She said that when the skeletons were exposed to the weather for a few days, their bones turned black and began to crumble, that Squire Satterfield had them buried in the Joliffe graveyard (Rivesville). All these skeletons, she said, were measured, and found to be about eight feet long."

Now and Long Ago: A History of the Marion County Area,
by Glen Lough (1969)
(This citation on West Virginia is courtesy of Dave Cain.)

Another of many examples, this one, collected by James Mooney (1861–1921), tells of the visit of very tall people from the west:

"James Wafford, of the western Cherokee, who was born in Georgia in 1806, says that his grandmother, who must have been born about the middle of the last century, told him that she had heard from the old people that long before her time a party of giants had once come to visit the Cherokee. They were nearly twice as tall as common men, and had their eyes set slanting in their heads, so that the Cherokee called

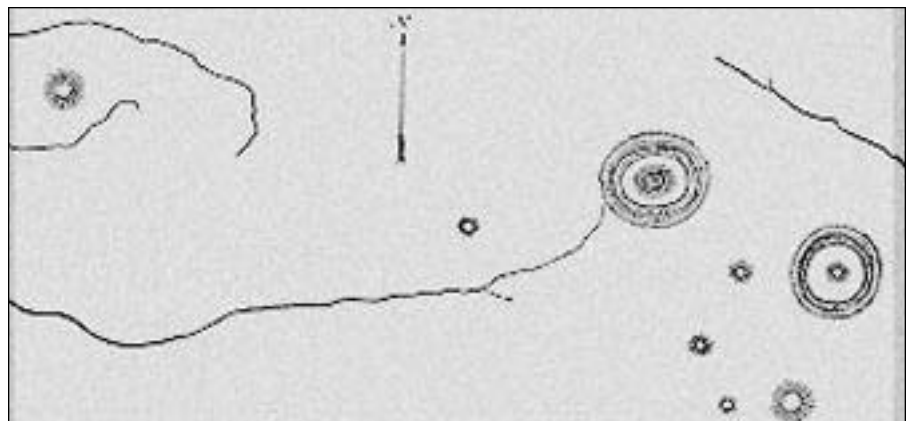
them Tsunil' kalu', "the Slant-eyed people," because they looked like the giant hunter Tsul' kalu'. They said that these giants lived far away in the direction in which the sun goes down. The Cherokee received them as friends, and they stayed some time, and then returned to their home in the west..."

This kind of recorded tradition did not start with Mooney but, rather, began early in American history. During the Colonial and post-Colonial eras, the information-seekers were keen on gathering as much knowledge of the forgotten past as feasible through native sources. Some of it was woven into romantic tales including verse, but the main part of it went into records which, like the accumulation of earth and debris over ancient village sites, became buried in the musty stacks of old libraries—considered to have no real "substance" in the emerging field of the white man's science.

"Of the very early history of the region which now embraces Lake County, but little can be written. The Mound Builders had occupied it and passed away, leaving no written language and but little even as tradition... These mounds were quite numerous... Excavations...have revealed the crumbling bones of a mighty race. Samuel Miller, who has resided in the county since 1835, is authority for the statement that one skeleton which he assisted in unearthing was a trifle more than eight feet in length, the skull being correspondingly large, while many other skeletons measured at least seven feet..."

Historical Encyclopedia of Illinois and History of Lake County,
edited by Newton Bateman, LLD, and Paul Selby, AM (1902)

From the outset of North American archaeology, no federally sponsored concern has researched and collected evidence specifically emphasising the existence of unusually tall Native Americans in prehistoric and even in historic times. There are reasons for this oversight, though in hindsight it has placed limits on our overview of prehistory. Because there were only occasional people of large stature born among the light-skinned, European races, numbers of giants were far from anticipated in America. Scientists in Europe, in case-by-case studies, declared their giants to have been victims of pituitary disorder. Another reason was that when the private citizenry in the US unearthed the bones of very tall and strongly constructed people, and when these disinterments were recorded, rarely was any comparison made with sites of similar contents.



Group of mounds in Brown County, Ohio



Dancing figures found on a copper plate in Union County, Illinois.

It was still a sort of wilderness in many rural areas right until the middle 1800s. In this, each discovery was "unique"—only to end up in the stacks of old township libraries to be compiled later as curiosities—if they survived at all. The following account originated around the year 1800:

"There were mounds situated in the eastern part of the village of Conneaut and an extensive burying-ground near the Presbyterian church, which appear to have had no connection with the burying-places of the Indians. Among the human bones found in the mounds were some belonging to men of gigantic structure. Some of the skulls were of sufficient capacity to admit the head of an ordinary man, and jaw bones that might have been fitted on over the face with equal facility; the other bones were proportionately large. The burying-ground referred to contained about four acres and, with the exception of a slight angle in conformity with the natural contour of the ground, was in the form of an oblong square. It appeared to have been accurately surveyed into lots running from north to south, and exhibited all the order and propriety of arrangement deemed necessary to constitute Christian burial..."

Historical Collections of Ohio in Two Volumes, by Henry Howe, LLD (1888)

Although not regarded by the government as reliable, the oral traditions of the native people in the eastern US aver the existence of possibly two races of giants, one supplanting the other by violent means. Here we have the first inkling of some very remote prehistory, preserved through the tradition of the Chippewa, Sandusky and Tawa tribes (members of the Algonquin language group), of the existence of giant, bearded men.

"In this connection I would say that Mr Jonathan Brooks, now living in town, stated to me that his father, Benjamin Brooks, who lived with the Indians fourteen years and was well-acquainted with their language and traditions, told him and others that it was a tradition of the Indians that the first tribe occupying this whole country was a black-bearded race, very large in size, and subsequently a red bearded race or tribe came and killed or drove off all the black beards, as they called them."

"Memoirs of Townships", by Wm H. Crane, in *The Firelands Pioneer*, Vermilion, Ohio (November 1858)

Some of the skulls were of sufficient capacity to admit the head of an ordinary man, and jaw bones that might have been fitted on over the face with equal facility; the other bones were proportionately large.

Offsetting the carefully recorded diaries of the rural folk, there were popular writers who creatively developed the more contemporary histories and folk legends, leaving to cursory treatment the deeper accounts of North American antiquities. These authors, while having captured the essence of the public perception of the noble native tradition, were not reconciled to the antique body of legend. The pens of James Fenimore Cooper (1789–1851) and Henry Wadsworth Longfellow (1807–1882) relate virtually nothing of the tall ones. Native Americans, as we know, were discouraged from writing, although some, such as David Cusick, circumvented the bias using Christian names. Fortunately, early missionaries gathered oral traditions from the tribal elders concerning men of giant stature.

But even the most informative or entertaining accounts could not instill enough respect for the native people to put an end to the further destruction of the sacred sites. The attitude of the white race in general towards the red race was an abomination, totally lacking in mercy and compassion. Many of the Native American skulls were compared with European skulls, but selectively so as to depict the current native populace as being of inferior intelligence. Almost without resistance, the black seeds of racial bias were forming in the uncorrupted soil of prehistoric interpretation.

Take, for example, the words of an important government official and popular writer, Henry Schoolcraft (1793–1864):

"The Indian has a low, bushy brow, beneath which a dull, sleepy, half-closed eye seems to mark the ferocious passions that are dormant within. The acute angles of the eyes seldom present the obliquity so common in the Malays and the Mongolians. The color of the eye is almost uniformly a tint between black and grey; but even in young persons it seldom has the brightness, or expresses the vivacity, so common in the more civilized races."

Bureau of Indian Affairs (1852)

Schoolcraft, who himself married a half-Indian woman, was apparently predisposed to labelling the native people in general as inferior. This kind of ridiculous prejudice underscored the tone for the unbridled continuation of the earthwork debacle. The result of this is accurately reflected in how archaeology was organised more than one hundred years ago, and may be summed up in the policy of Joseph Henry, first secretary of the

Smithsonian Institution. Said Henry in 1846: "The collection of data should precede theorising..."

Unfortunately, the collection of data seemed to have no end, and any subsequent theorising was (and is) in a state of transience. The Smithsonian, playing a sort of leading role in the massive undertaking attempting to cast light on the inscrutable prehistory of the United States, inadvertently collected far too many relics than it could ever analyse in a comprehensive sense.

Estimates of the number of mounds in Ohio alone, at the end of the Colonial period, topped ten thousand. Today, less than one-twentieth of these exist, and, moreover, they exist in a reconstructed form.

No quarter of special status was given to any earthwork, no matter how sacred or strategic to tribal lands. It was a holocaust of an unprecedented nature, for it undermined the very morale of the native people who understood the peace of their ancestors to be ruined.

Differing only in the professionalism somewhat absent from the previous 70 years of ghoulish quests, Henry's mandate dictated emphasis on the creation of an inclusive system of excavation, recording and description. Any analysis that followed had to be based upon this criterion. But competent analysis of anomalies rarely (if ever) came from the Smithsonian and other institutions formally engaged in the practice of exhumation. Given this understanding, it is no wonder that the Smithsonian is believed by knowledgeable people to be actively stymieing research that would produce a more enlightened view of American prehistory.

There is, however, some compensation for this oversight in that the Smithsonian—like the Peabody, and the Carnegie shortly thereafter—faithfully upheld Henry's mandate to detail, as was feasible, their mound "explorations". However, the present-day inaccessibility of the bones and objects these people removed for future study is a reflection and symptom of the proposed "oversight".

One thing that pleased us in this research effort was the fact that there were many skeletons of gigantic frame discovered and reported by the Smithsonian, boosting the validity and value of the old township diaries as well as the native legends. Some of these are presented below.

A Brief History of the Museum

The Smithsonian Institution, easily the world's largest museum complex, began from the generous gift of James Smithson, an English scientist, in 1829. Believed born illegitimate (especially in the eyes of his later detractors), Smithson was a "diligent young student", receiving a Master of Arts from Pembroke College, Oxford, in 1786. He became a distinguished scientist.

The gentle man passed away in 1829, bequeathing his fortune to nephew James Henry Hungerford with the stipulation that if this man died without an heir, the remainder of the fortune would go to the United States. It seems he felt that the United States was the future of Britain. Perhaps Smithson saw the "New World" as

fertile, worthy, intellectual territory. Hungerford died in 1835. Although there was some controversy in the interim, the finding of the Smithsonian, based upon the more than half-a-million-dollar gift, took place officially in 1846. His legacy to the American people was, in his own words, "for the increase and diffusion of knowledge".

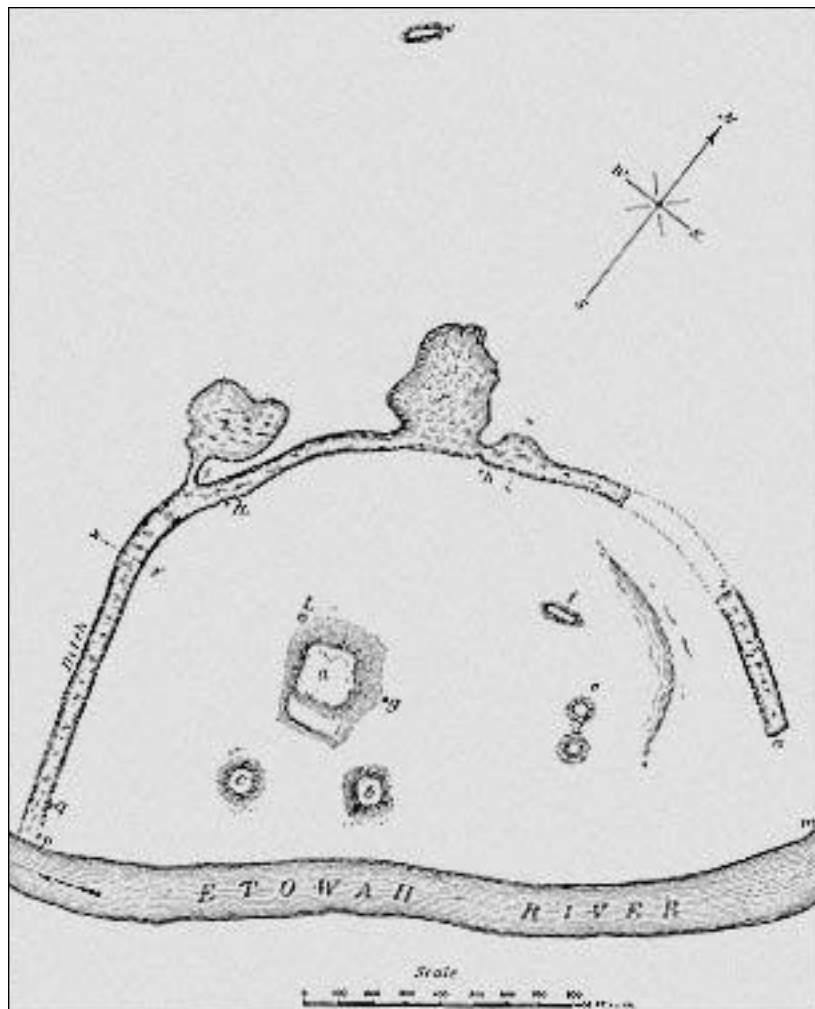
Since that time, the museum's collections have increased considerably, with problems in the cataloguing and location of stored finds developing due to changing standards of administrations over the last 150 years. By analogy, the Vatican's antique cache of confiscated, problematic treasures may pale in comparison to the Smithsonian's boatload of diffuse evidence. The pity of it is that Smithson's request has taken on a different mode of interpretation.

Instead of diffusing knowledge, it has unwittingly become confused with the problem of sprawling storage.

Powell and Thomas

"Grave a, a stone sepulcher, 2½ feet wide, 8 feet long, and 2 feet deep, was formed by placing steatite slabs on edge at the sides and ends, and others across the top. The bottom consisted simply of earth hardened by fire. It contained the remains of a single skeleton, lying on its back, with the head east. The frame was heavy and about seven feet long. The head rested on a thin copper plate ornamented with impressed figures..."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890-1891 (published in 1894) (Cyrus Thomas's investigations of Etowah)



Plat of the Etowah Group, Bartow County, Georgia. Grave A (found in the largest mound of the group) contained a seven-foot skeleton of a heavy frame.

In 1882, after some 36 years of growth and sound management, Smithsonian executive John Wesley Powell (of Grand Canyon exploration fame, 1869-1872), hired Cyrus Thomas. Powell wanted this man to head up the fieldwork for the Smithsonian's newly created Bureau of Ethnology, specifically the Eastern Mound Division.

Thomas was a minister and an entomologist, whose broadened interests included archaeology. He was, in other words, a bible-advocating, insect-adept archaeologist who believed in the mystery of a lost race at the time of his being recruited.

Powell, who was much in sympathy with the plight of Native Americans, having lived among them for a length of time, believed that there was no lost or mysterious race of mound builders. He desired to credit the downtrodden native people with the worthy and gentle arts associated with the ancient mound building societies. Subsequently, and in light of other political considerations marking the era, Powell sought to enact these personal convictions through the instrumentality of Thomas.

In spite of his personal beliefs, Thomas was not outspokenly resistant to accepting the position. Besides, Congress was allocating solid funding for this proposed ramble through the ancient landscape.

There was apparently an important decision made at this time concerning the facilitation of an enveloping theory—so necessary to create order where chaos loomed. Before discharging a book, one logically creates an outline to guide one's thoughts. This was to become a hierarchical arrangement that would decide the angle of vision for the categorising of the finds that would be made.

On one hand, the belief that others had discovered North America before Columbus (such as Phoenician, Egyptian, Hebraic, Greek, Roman, Celt, Scandinavian or even Asian mariners) was explored. On the other hand, the idea of the continent having been isolated from outside influences was put on the table. It was perhaps because of Powell's deference to the native kinship that the latter idea—i.e., screening out any extra-continental visitors—was adopted. Needless to say, this was an extraordinary assumption, and one that has affected decision-making right until the present day. On the positive side, it viably linked the living factions of the Native American people with the more ancient mound-building folk, and shortly thereafter it was responsible for the faintly successful preservation of what remained of the Mound Builders' legacy. From this it may be understood how aspects of Powell's work, such as analysis of the social order of the Mound Builders, was not a priority.

Powell's decision regarding isolation was in reality a two-edged sword. While it was a meaningful step that fostered a meagre though important harmonic between the federal government and the native people, it was regrettably based upon a false notion. An example of its contradiction is found right in the *12th Annual Report* itself. Again and again, Thomas and his operatives came

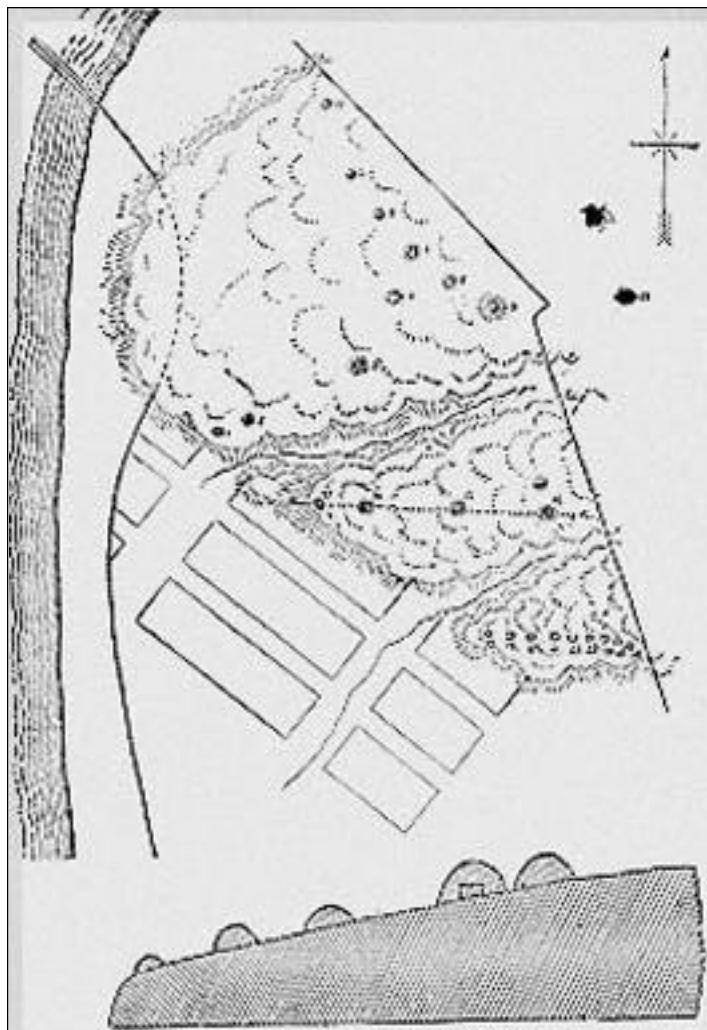
up with anomalous evidence directly questioning Powell's sweeping suppositions.

"Cave burials occur in this district in the following counties: In Grayson, Hart, Edmonson, Barren, Warren, and Fayette counties; Kentucky; Smith, White, Warren, Giles, Marion, and Fentress counties, Tennessee; and Bartow county, Georgia. These localities lie mostly in a belt extending in a north and south direction through the center of the district.

"In most of these caves, both in Kentucky and Tennessee, the bodies appear to have been laid on the floor of the cave, sometimes in beds of ashes, sometimes on a pavement of flat stones. There are, however, some instances in which the bodies have been found incased in stone slabs, and afterwards imbedded in clay or ashes. In Smith and Warren counties,

Tennessee, and in Warren and Fayette counties, Kentucky, the flesh of the bodies was preserved and the hair was yellow and of fine texture. In some cases the bodies were enveloped in several thicknesses of coarse cloth with an outer wrapping of deer skin. Some of the bodies were wrapped in a kind of cloth made of bark fiber, into which feathers were woven in such a manner as to form a smooth surface. In two cases the bodies, placed in a sitting or squatting posture, were incased in baskets. In one of the caves in Smith county the body of a female is said to have been found, having about the waist a silver girdle, with marks resembling letters."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890-1891 (1894) (Explorations in the Tennessee district)



Mound Group, Dunleith, Illinois. "Near the original surface, 10 or 12 feet from the center, on the lower side, lying at full length on its back, was one of the largest skeletons discovered by the Bureau agents, the length as proved by actual measurement being between 7 and 8 feet."

Armed with a self-created doctrine powered by ample funding, and with a little help later from the one-way door to the Smithsonian's inaccessible

catacombs, Powell and his underling in the years that followed nearly succeeded in the obliteration of the last notions of the legendary, mysterious and antique class of mound-building people and, for that matter, any people that didn't fit into the mould of his theory. Did Powell intentionally overlook some of the archaeology so as to focus on his own special agenda?

Powell and his associates at the Bureau were quite certain that people had arrived in the Americas only sometime after the first

Egyptian dynasty—less than 4,500 years ago! They also believed that the Mississippi Valley was sufficiently isolated from the Ohio Valley to warrant the simultaneous flourishing of quite distinct cultures over a long period.

Since carbon-dating had not yet been discovered, Thomas used stratigraphic analysis (after Lyell) and, following the rest of the mandate, included detailed record-keeping and documentation whenever appropriate. His findings were broadly accepted and are still referenced.

"Underneath the layer of shells the earth was very dark and appeared to be mixed with vegetable mold to the depth of 1 foot. At the bottom of this, resting on the original surface of the ground, was a very large skeleton lying horizontally at full length. Although very soft, the bones were sufficiently distinct to allow of careful measurement before attempting to remove them. The length from the base of the skull to the bones of the toes was found to be 7 feet 3 inches. It is probable, therefore, that this individual when living was fully 7 ½ feet high. At the head lay some small pieces of mica and a green substance, probably the oxide of copper, though no ornament or article of copper was discovered."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890–1891 (1894) (Explorations in Roane County, Tennessee)

But Thomas's time was limited because of the large territory he was to explore. Under such working conditions, anomalies were put aside for future research—to be forgotten, as it has turned out. Thomas was forced to rely on the accounts of operatives in many cases. Evidently, some of these people discerned between "Indian" burials and the burials of the Mound Builders, perhaps challenging the patience of Powell.

"No. 5, the largest of the group, was carefully examined. Two feet below the surface, near the apex, was a skeleton, doubtless an intrusive Indian burial... Near the original surface, 10 or 12 feet from the center, on the lower side, lying at

full length on its back, was one of the largest skeletons discovered by the Bureau agents, the length as proved by actual measurement being between 7 and 8 feet. It was clearly traceable, but crumbled to pieces immediately after removal from the hard earth in which it was encased..."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890–1891 (1894)

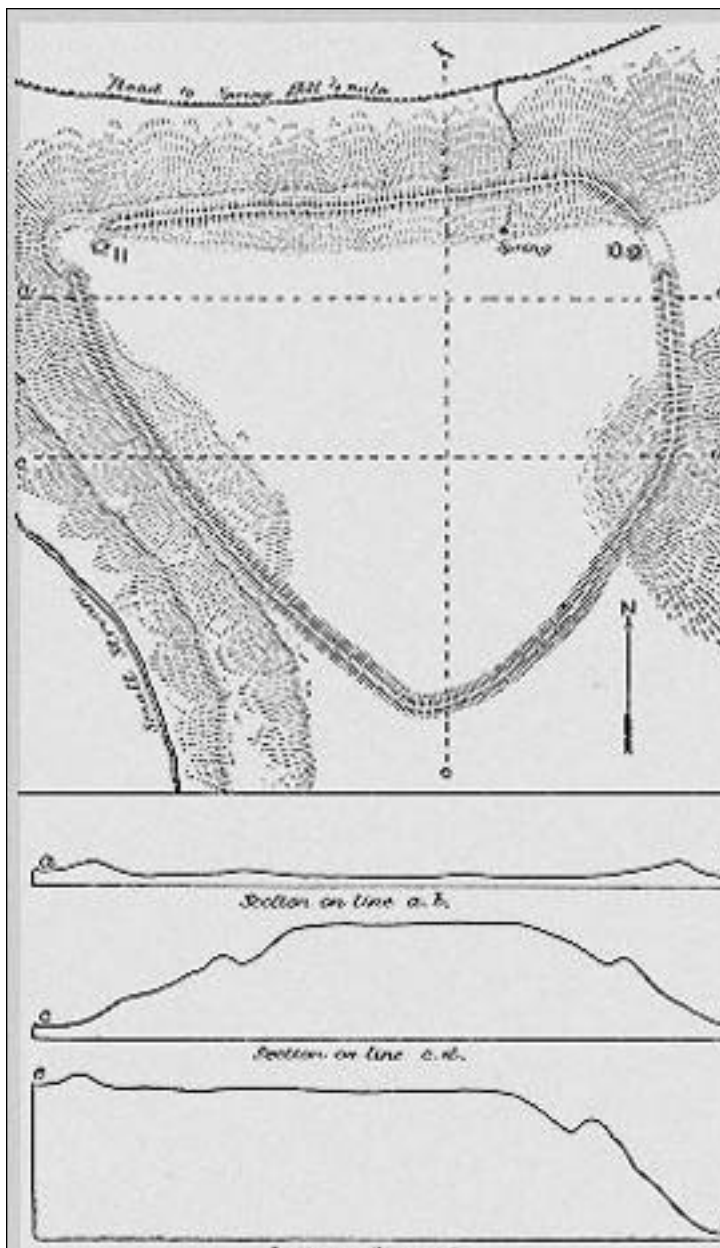
Regarding the problem of "intrusive" Indian burials, what kind of a time gap were these men looking at between the original

burials and the later ones? As his agents uncovered the physical evidence for powerful men of towering stature, Thomas held the position that any and all skeletal remains represented the direct ancestry of the present-day people. Was it not plausible to consider an extended "family" or hierarchical group of very tall folk who served with the people? Were they selective enough in their sexual associations to appear, overall, as a race with its own peculiarities and even physical characteristics? The findings that didn't fit into the guideline established by his superior were summarily recorded and forgotten by Thomas—a legacy we have inherited today.

"An old Indian mound has been opened on the farm of Harrison Robinson, four miles East of Jackson, Ohio, and two skeletons of extraordinary size and a great quantity of trinkets have been removed. Some years ago a party of relic hunters, supposed to have been sent out in the interest of the Archeological Society, visited the Robinson farm, and after a few days' search removed a great collection of stone hatchets, beads and bracelets, which were packed and shipped to

an Eastern institute, and until this recent accidental discovery it was supposed that everything had been removed by the relic hunters. It is thought by many that more relics are to be found, and preparations are being made for a thorough investigation."

The Adair County News, Kentucky (January 5, 1897)



Spring Hill enclosure, Kanawha County, West Virginia. In the bottom of Mound 11 (upper left) was found a skeleton "fully seven feet long".

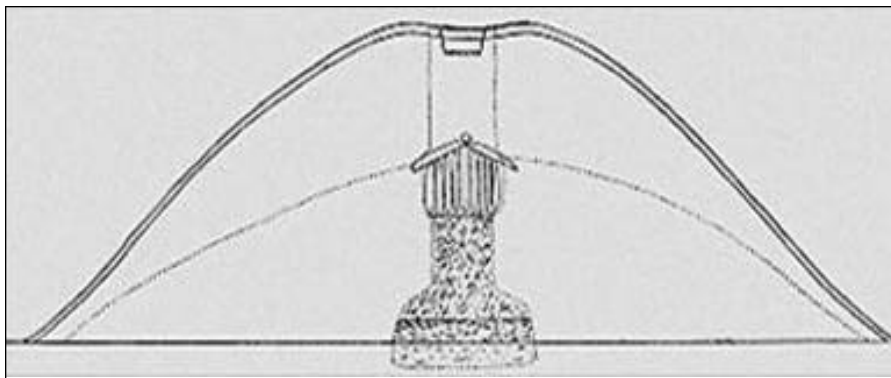
What has become of all the evidence? Again and again, only a single long skeleton or two was found among those of normal size. The understanding of tall, ruling chiefs and their wives was not developed at all, as is evident in these examples.

"The other, situated on the point of a commanding bluff, was also conical in form, 50 feet in diameter and about 8 feet high. The outer layer consisted in sandy soil, 2 feet thick, filled with slightly decayed skeletons, probably Indians of intrusive burials. The earth of the main portion of this mound was a very fine yellowish sand which shoveled like ashes and was everywhere, to a depth of 2 to 4 feet, as full of human skeletons as could be stowed away in it, even to two and three tiers. Among these were a number of bones not together as skeletons, but mingled in confusion and probably from scaffolds or other localities. Excepting one, which was rather more than 7 feet long, these skeletons appeared to be of medium size and many of them much decayed..."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890-1891 (1894) (Pike County, Illinois)

"No. 11 is now 35 by 40 feet at the base and 4 feet high. In the center, 3 feet below the surface, was a vault 8 feet long and 3 feet wide. In the bottom of this, among the decayed fragments of bark wrappings, lay a skeleton fully seven feet long, extended at full length on the back, head west. Lying in a circle above the hips were fifty-two perforated shell disks about an inch in diameter and one-eighth of an inch thick."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890-1891



A Section of the Great Smith Mound, Kanawha County, West Virginia. This cone-shaped mound rose 35 feet high and measured 175 feet in diameter at its base. The interior of the mound contained a vault made of timber measuring 12 feet by 13 feet. It was positioned within the mound 20 feet above surface level.

(1894) (Kanawha County, West Virginia)

Largest in the collective series of mounds, the Great Smith Mound yielded at least two large skeletons, but at different levels of its deconstruction by Thomas's agents. It was 35 feet in height and 175 feet in diameter, and was constructed in at least two stages, according to the report. The larger of the two skeletons represented a man conceivably approaching eight feet in height when living.

"At a depth of 14 feet, a rather large human skeleton was found, which was in a partially upright position with the back against a hard clay wall... All the bones were badly decayed, except those of the left wrist, which had been preserved by two heavy copper bracelets..."

"Nineteen feet from the top the bottom of this debris was reached, where, in the remains of a bark coffin, a skeleton measuring 7½ feet in length and 19 inches across the shoulders was discovered. It lay on the bottom of the vault stretched horizontally on the back, head east, arms by the

sides... Each wrist was encircled by six heavy copper bracelets... Upon the breast was a copper gorget...length, 3½ inches; greatest width 3½ inches..."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution 1890-1891 (1894) (Kanawha County, West Virginia)

The pressure of the time schedule doubtless made it inconvenient to consider seriously the possibility of an ancient lineage of leaders taking the form of very tall people. The fact of gigantic stature never settled in as a clue to a greater mystery, and the evidences of very tall, ruggedly built men vanished—and often enough into the Smithsonian's temporary charnel house of pre-Columbian miscellany.

"Three feet above...the skeleton of a large, strongly built man lay extended at full length with the face up, the head toward the east... The skull was obtained almost entire. Under it were thirteen water-worn quartz pebbles. The femur measured 18½ inches..."

12th Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890-1891 (1894) (Union County, Mississippi)

A femur (thigh bone) exceeding 18 inches would indicate a man of very great height—easily over seven feet. Femurs exceeding 20 inches have been found, however.

Though hindsight is said to be 20/20, Thomas's methodology was little better than a government-sanctioned dissolution of the sacred burial places. He dismantled the sanctuaries and charnel houses with the fervour of a man whose first priority was to impress his employer. From Florida to Nebraska, including

23 states and Canada's Manitoba region, over the next seven years he and his agents worked like men possessed of a deadline.

"Several years ago an Indian mound was opened near Cartersville, Ga., by a committee of scientists from the Smithsonian. After removing the dirt for some distance, a layer of flagstones was found, which had evidently been dressed by hand, showing that the men who quarried the rock understood the business. These stones were removed, and in a vault beneath them was found a skeleton of a giant, measuring seven feet and two inches. His hair was coarse and jet-black, and hung to the waist, the brow being ornamented with a copper crown. The skeleton was remarkably well preserved and taken from the vault intact. Nearby were found the bodies of several children of various sizes. The remains of the latter were covered with beads made of bone of some kind. Upon removing these, the bodies were found to be enclosed in a network of straw or reeds, and underneath these was a covering of the skin of some animal. In fact, the bodies had been prepared

somewhat after the manner of mummies, and will doubtless throw new light upon the history of the people who reared these mounds. On the stones which covered the vault were carved inscriptions, and if deciphered will probably lift the veil which has enshrouded the history of the race of giants which undoubtedly at one time inhabited the continent."

Georgia's Landmarks, Memorials, and Legends, by Lucian Lamar Knight (1868–1933) (Byrd Printing, Atlanta, 1913–14)

Could this special burial have been another kingly individual? In these increasingly hasty intrusions into the native burial grounds' inherent sanctity, the holocaust delivered its zenith under the officialdom action of former Union Major Powell. This man, who in his youth had lived among the "Indians", somehow was insensitive to the sanctuary of their graveyards. But others came later to do a fair share of damage as well, all in the name of information gathering. The prehistory of eastern North America is not what we have been asked to accept from the efforts of Cyrus Thomas, nor from the subsequent authorities who based so much of their work upon his, and the reason is worth repeating: many or most of the oldest mounds and subterranean burial acreages were promptly destroyed, long before any focused "scientific" effort came on the scene.

Apart from the disregard of the settlers' records, the other part of the problem is the labyrinthine mausoleum that is the Smithsonian bone and artifact collection. In sum, we today are deprived of the real knowledge of the more ancient lineage. The early settlers observed that the giants of old may have passed on their grand stature to the later native people, for there were individuals among their later progression who were of a size and build that goes beyond our current notions of Native American physicality.

The Telling of the Bones

It is difficult not to understand the probability of an elite lineage of tall men and women who propagated their own genetic inheritance. These people lived, worked and bred together. Were their marriages arranged to ensure the continuance of the grand stature in roles of leadership and protection? In his classic *Red Earth, White Lies*, Vine Deloria says:

"From talking with elders of several tribes, my understanding is that the Indians were and are describing people of more than average height. In fact, some elders as a routine matter have reported that the Indians themselves were much larger and taller."

The question has been raised, asking whether there was giant stature among the Native American people in earlier historic times. From Hardesty's *History of Monroe County, Ohio*, we discovered this:

"He further told me of the killing of a big Indian at Buckchitawa, about the time of the settlement at Marietta. The Indians had a white prisoner whom they forced to decoy boats to the shore. A small boat was descending the river, containing white people, when this prisoner was placed under the bank to tell those in the boat that he had escaped captivity, and to come to the shore and take him in. The Indians were concealed, but the big Indian stuck his head out from

behind a large tree, when it was pierced by a bullet from the gun of the steersman of the boat. The Indians cried out 'Wetzel, Wetzel' and fled. This was the last ever seen of the prisoner. The Indians returned next day and buried the big Indian, who, he said, was twenty inches taller than he was, and he was a tall man.

"When Chester Bishop was digging a cellar for Asahel Booth, at Clarington, many years ago, he came across a skeleton, the bones of which were removed carefully by Dr Richard Kirkpatrick, and from his measurement the height of the man when living would have been 8 feet and 5 inches. It is probable that these were the bones of the big Indian of whom the Indian at Jackson's told me."

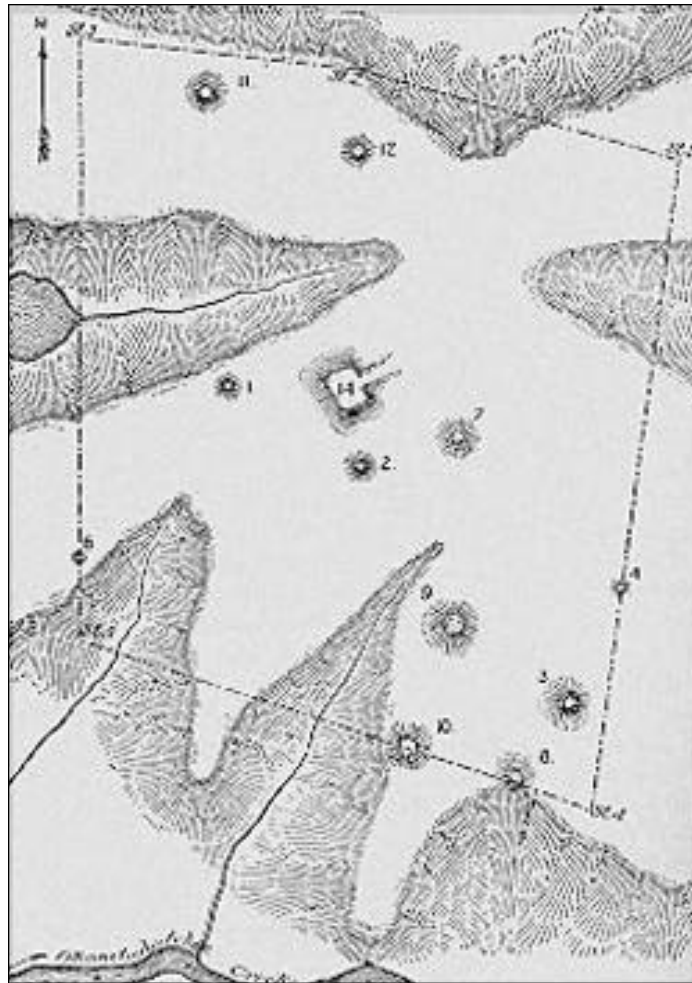
And again this:

"A large quantity of human bones was discovered in a fissure near the

United States Coast Guard lighthouse. A crude tomb of black stone slabs, of a formation not known on the island, was found many years ago beneath the roots of a huge stump. Eight skeletons were found, one measuring over seven feet in height."

Sketches and Stories of the Lake Erie Islands
by Theresa Thorndale, Sandusky (1898)

Some of the settlers and their descendants may have seen clearly, but the representatives of the Smithsonian and other sanctioned institutions, in spite of good intentions, lacked the kind of thoroughness in their analyses that included a broadened field of vision. We have felt heartily from the beginning of this research that the Smithsonian is the recipient of mandates put into



Group of mounds in Union County, Mississippi

place well over 100 years ago. It is virtually exempt from NAGPRA (the Native American Graves Protection and Repatriation Act), for the reason (say they) of there being too much data to finish analysing to prepare for repatriation.

"Concealing evidence that conflicts with accepted theory is common scientific skulduggery. For years the Smithsonian Institution has been accused of hiding in storage vaults things it doesn't like. In 1968 two Neanderthal-like skulls with low foreheads and large brows were found in Minnesota. As for dating, University of Minnesota scientists said they were reluctant to destroy any of the material, although carbon-14 testing only requires the burning of one gram of bone. They were sent to the Smithsonian. Later, Dr Lawrence Angel, curator of physical anthropology at the institution, said he had no record of the skulls there, although he was sure they were not lost.

We have a right to wonder whether some professional scientists mightn't find a really early date for the bones distressing."

American Indian Myths and Mysteries, by Vincent H. Gaddis (1977)

Why distressing? Because no true Neanderthal remains have ever been recognised by any Federal authorities as originating on the

North American continent, what to say of the Americas in general. Is there yet today a conflict between established theory and what has been physically discovered? Is the "ghost" of Powell yet haunting the halls of the Museum?

So what is the policy of the Smithsonian? Does the institution intentionally withhold information? Is the fact of a race of giant warriors and chieftains threatening to the closed, internal doctrine of American archaeology? That there was a race of men and women possessing an unusually tall and strong physicality living over an extensive area of North America has become a forgotten fact.

There are other examples, and names like the Gungywamp Society of Connecticut, Ed Conrad and others have bizarre stories to relate about the ineptitude or simple prejudice of the Smithsonian when dealing with their materials. In these examples, there is growing appreciation for an actual cover-up.

Another grotesque twist is the Army Medical Museum's collection. According to the ABC TV News special *Skeletons in the Closet*, the United States government acquired a real interest in Indian corpses. The Surgeon-General, in post-Civil War 1868, requested that the Army collect the skulls, utensils and weaponry of Native Americans "as far as you are able to procure them". According to the report, these were to be sent to Washington, DC, as part of a program that studied the effects of modern bullets and other weaponry on human bodies. The collection of such

remains, estimated at 4,000, was taken mostly from grave and battle sites. What was left over became part of the Smithsonian collection, estimated at 18,000 individuals, and this by way of the Army Medical Museum.

"The objects here collected which have not been given, or acquired by exchange, have been purchased for the use of the museum by order of the surgeon-general... There is a skeleton of a giant, who, in life, measured seven feet, prepared by Auzoux and mounted by Blanchêne's method, which, if I may use that term, is really a beauty. It is as white and clean as new fallen snow, and the brass joints and screws which keep it together are bright, and of the latest style and finish..."

"The Army Medical Museum in Washington", by Louis Bagger, in *Appletons' Journal: A Magazine Of General Literature*, vol. 9, issue 206 (1873)



The mound at Marietta, drawn by Henry Howe in 1846. Howe stated this mound was "of a magnitude and height which strike the beholder with astonishment".

Its base had a diameter of 115 feet; its height reached up 30 feet. It was surrounded by a ditch four feet deep and 15 feet wide.

Today, however, bones are no longer as good a source of information as they once were thought to be, and for several good reasons. Bone is composed dominantly of the metallic calcium, yet is made up of organic molecules. Depending on moisture and temperature, it will decay, break down with time and return to the condition of the soil after a certain number of centuries.

Bone evidence has created over-emphasis on certain periods

of prehistory, in this region the so-called "Hopewell" and "Fort Ancient" (Mississippian) people. Thus, a great proportion of the Archaic and early Adena bones discovered were decomposed beyond preservation. Due to a lack of skeletons, other more antique periods have not received the same kind of recognition—save from the better scholars affecting the interested public's view of the ancient world.

Ironically, the holocaust of giants, while deadening our sense of the past, may well serve as a lesson for the future.

Recommended Reading

• Vine Deloria, Jr, *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*, Fulcrum Publishing, 1997, ISBN 1-55591388-1

About the Author:

Ross Hamilton is a writer and investigator of ancient sites, and lives in Cincinnati, Ohio. He is an initiate philosopher with a background in general science as well as spiritual science. He is the author of *The Mystery of the Serpent Mound* (North Atlantic Books, 2001), and is currently working on several projects including an upcoming book entitled *A Tradition of Giants*. Ross may be contacted by email through his website, <http://www.Greatserpentmound.org>, or directly at ophi@greatserpentmound.org.



THE INSTALLATION

An Interview with Valery Uvarov
by Graham W. Birdsall © 2003

The following extracts were transcribed from a filmed interview with Valery Uvarov, of Russia's National Security Academy, conducted by Graham W. Birdsall, Editor of the UK-based *UFO Magazine*. The interview took place at the 12th International UFO Congress Convention and Film Festival, held February 2–8, 2003, in Laughlin, Nevada, USA.

Graham Birdsall (GB): What is your official title?

Valery Uvarov (VU): I am head of the Department of UFO Research, Science and Technical, National Security Academy, based in St Petersburg, Russia.

GB: This, then, is an official Russian government agency?

VU: Absolutely. I am answerable to two people above me. They are answerable to the next person above them, who is our President [Putin].

GB: What exactly is your remit?

VU: Our research efforts are divided into two parts. Firstly, we are constantly analysing data coming in from all over the world. We then extract what we consider to be the most interesting information

through our database—which is yellow, which is red. This, then, is released to various departments throughout Russia.

The other aspect of our research stemmed from asking the question: do UFOs exist or not? For sure, we know they exist, but what is behind their activity, their interest? This is the most important issue for us, and what we mostly focus our investigations on.

GB: There is active co-operation between NASA and Russian aerospace officials at a technical, scientific and maybe even military level. Do you liaise or have ties with organisations similar to your own overseas?

VU: I can tell you, truthfully, that just a couple of days before I flew to the United States I had a meeting with my...let's say, my bosses. And they said they are very interested in co-operating with other organisations...let's say, our friends in the West. So, I can tell you that this particular mission is at the starting point. I am charged with finding the right people. When this is done, and the next stage is activated, we can make some concrete steps.

GB: Earlier, off camera, you alluded to some important developments concerning the Tunguska explosion of 1908. For the record, can you tell us why you now believe you know the cause?

VU: It is not so much a case of belief; we *know* what caused it. It was a meteor, but a meteor that was destroyed by...let's say, a *missile*.

The missile was generated by a material installation. We don't know who constructed it, but it was built long, long ago and is situated in Siberia, several hundred kilometres north of Tunguska.

I can tell you that our investigation has



Valery Uvarov
(Photo courtesy of *UFO Magazine*, UK)

THE TWILIGHT ZONE

revealed more than one explosion at Tunguska. Let me share something with you. The last time that this installation shot down a meteor was on 24/25 September last year. The Americans...they have three bases...they, too, noticed this explosion.

GB: Forgive me, but some will say this sounds like science fiction.

VU: Graham, you know that when we talk about the truths that lie behind this subject, we only do so with those who have an understanding of the responsibility that goes with it. And you know that we are dealing with a technology much further ahead of our own—one capable of doing things that we cannot.

GB: Can you be more specific about the location of this installation?

VU: Look for the site of the Tunguska explosion. To the southeast is the very large and famous Lake Baikal. Beyond that, to the north, is a huge and barren territory covering 100,000 kilometres. Hardly anyone lives there. There are no towns or cities. Here is where we located the installation...

GB: Are you aware of strange stories or rumours concerning the so-called "Planet X"? If some new and heavenly body had entered our solar system, astronomers would surely detect it and declare its presence.

VU: I cannot speak for astronomers in the West, but astronomers within our Academy tell us we have nothing to fear. I have heard people talk about a rotation figure of 3,600 years for this planet, which is in a similar orbit to that of the Earth but behind the Sun. We know that this planet and the installation in Siberia are closely

connected. Let me say that we believe that this installation is keeping that planet in a stable orbit. If that planet were to move, to shift orbit, the entire solar system would become unstable. Those of us in the Academy are sure that this planet is inhabited, and that this installation is designed to protect them and us. We are sure that nothing dangerous will happen. Everything is under control.

Our investigations have shown that the Earth has a pulse—a finely tuned frequency that affects everything, every living thing. Some 12,500 years ago, this pulse corresponded to 360 days of the year—study the old Egyptian calendar—but then an asteroid struck the Earth. We believe the orbit of the Earth was altered, artificially, to compensate for this. Our planet moved further away from the Sun, to a frequency pulse of 365.

This has taught us to believe that we have friends—friends who watch over us, silently. They did not allow then, nor will they allow now, any planet, comet or asteroid to strike and destroy the Earth. This, for us, is now absolutely clear.

Those who wish to weaponise space...to tell you the truth, all of us involved in this project feel a pain in our hearts. Here we all are, investigating this installation and some other stuff, material stuff, none of which was constructed by Russians or Americans but by someone else, someone from outer space. It saddens us when we think what could happen if weapons are put into space.

Let me speak frankly. This installation has a power system, an energy source. We have located this. It was during the conflict in the former Yugoslavia that we first noticed an increase in the output of that energy. For us, it was incredible, but we now know that this installation reacts to social upheaval and conflict.

Part of our investigation involved searching through ancient records and archives, and then we came

across the *Echutin Apposs Alanhor* [sic] texts. We call them the *Alanhor*, and they are at least 4,000 years old. They describe the installation, in scientific terms, as to what was taking place there. It's amazing.

I have visited the area twice. The first time our equipment detected strong levels of radiation. I have to tell you, it was pretty dangerous; we couldn't hide from it. The few local inhabitants of the area knew of the installation, of course, and they described it to us. They describe metal-like structures and drew them for us. We plotted everything on a map. But these people, their families, the animals, they were suffering from radiation sickness.

The radiation levels have been continuously monitored for the past six years, and now everyone—including the animals—has left the forest.

Let me tell you something about the Tunguska explosion—something that has never been spoken of before. Two months before the explosion, every living animal fled the region. It was as if the installation had powered up to deal with the asteroid. With that came an increase in radiation. The same thing is happening now, today.

GB: Are there any plans to mount another expedition to the area and to visit the installation?

VU: The radiation is a factor but, yes, another expedition is planned for later this year. Look, we want to be open and honest about this. We welcome international participation, but the people we invite must be responsible in the eyes of the world. We want people who are honest, open-minded and transparent, who are eager and willing to co-operate and exchange and then disseminate the scientific data.

I invite you, Graham, to come to Russia and visit the installation as an observer.

GB: I would be honoured. Thank you.

VU: You can tell people that we, Russia, have decided that it is time that other people should know about this, and not just a few.

Editor's Note:

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THE MYSTERY OF THE 120-MILLION-YEAR-OLD MAP

An Interview with
Professor Alexander Chuvyrov
by Adriano Forgione © 2002

In late April 2002, *Pravda* released the news that a 3-D map going back to 120 million years ago had been discovered in Chandar, a village in Russia [see NEXUS vol. 9, no. 4]. The discoverer, Alexander Nikolaevich Chuvyrov, Professor of Physics at the University of Bashkiriya in Ufa, Russia, shocked journalists and scientists around the world by proposing that incredible dating. The map should therefore confirm the existence of an advanced civilisation during an era in which giant reptiles dominated the world. In fact, the first hominid, the *Proconsul*, dates back to 20 million years ago. Such a dating, if confirmed, could rewrite the history of mankind and give credit to the supporters of the great antiquity of our species.

I was surprised by the fact that Chuvyrov is an academic, an esteemed scholar—something that gives a certain value to what was written in the press releases. There was only one way to look into the matter and answer all the doubts that arose from this news: invite Professor Chuvyrov to Italy for a conference. That's what I did. What follows is the transcript of my interview with him.

Adriano Forgione (AF): Professor Chuvyrov, how did you get involved in this research?

Alexander Chuvyrov (AC): The finding was fortuitous, like most of the findings in the scientific world. I was studying with my research team the cultural identity of the peoples of the Urals. We were trying to work out the historical frame of these peoples, who left visible tracks all over Russia, from the 15th century backwards since there is no systematic study of the subject. Unfortunately, I couldn't find a *superpartes* director for the project because all the experts I contacted were too much influenced by their own ideas or those of their colleagues. So I decided to take the leadership of my project for myself.

AF: In which circumstances did you find the stone?

AC: The aim of the project was the finding of written records belonging to peoples of the southern Urals. We were exploring the possibility that one of these ethnic groups kept an archive or chancery

system like that of China. Between 1998 and 1999 we made a screening of all the storage rooms of the museums of the area. We found a certain number of seals and inscriptions on ornaments and pottery that were, in the majority of cases, written in the oldest Chinese language that uses Jiaguwen characters. It was a great discovery. The Jiaguwen inscriptions suggest that the Chinese arrived in western Russia in ancient times, and that was hitherto unknown.

During the summer of 1998, we wrote a systematic catalogue of all the findings and we were amazed to find out that local people spoke the Chinese language up to the 20th century. At the moment we know that there are more than 600,000 such inscriptions in the archives, and it will take a massive effort from the philologists to examine them all. During the two years of our project, we were looking for a stone library like those found in Mongolia, Japan and Singapore. We tried to figure out what we should have looked for, and then we decided to follow a line: we noticed that archaeologists and historians believed that what we saw as Chinese characters were in fact ornaments or drawings. So I decided to look for all the etchings, ornaments or drawings on megaliths.

At the end of 1999, in the archives we found a list of the monuments of the southern Urals compiled between 1920 and 1921. The texts were notes by the scientists who were studying the matter at that time. In those notes we found important clues as to the existence of six carved stones of the Ufinca or Karadele River area—the "Black River" in the local language. Those stones were described as having such intricate decora-

tions and etchings that it was impossible to reproduce them on paper. Furthermore, the notes spoke of two stelae located 12 kilometres from the first location. We called the area of those documents Pisanicy—a Russian name that indicates a place with petroglyphs. At that point, we had enough material to go on with our investigation, so, at the end of 1999, we started looking for the six slabs.

AF: How did you find the first slab without further clues?

AC: In the beginning, we started out with telephoto lenses and helicopters, but we didn't find anything. I guided six fruitless expeditions, then I thought to contact the elder of Chandar, a nearby village. I met him where Schmitt made his expedition in the 1920s. He showed me some objects that Schmitt and other archaeologists had left at his place. When I asked him if he knew anything about the stone slabs we were looking for, he replied that



The stone slab map, photographed in a room at the Ufa Museum. (Photo courtesy of Professor Alexander Chuvyrov and *HERA Magazine*)

one of them was under the floor of his house. It was being used as the base for the stairs, but its weight was making it sink into the ground, causing seepage. For that reason, he wanted to destroy it and make concrete grit out of it. So we traded a truckload of grit for the slab, and we promised we would build all the roads he needed.

Eventually, I went back there with a lot of students and some archaeologists and physicists. It took us two days to get it out. The stone is 148 centimetres high, 103 cm wide and 16 cm deep. To lift it, we used the Egyptian method, making the slab roll on wooden cylinders. We took it to the laboratories, washed it and immediately realised that it was the map of a large area.

I couldn't believe what I saw. I knew it was a map from the start—a 3-D map. Something like that simply couldn't exist, because the place where it was found was a small valley where the first roads were built just 10 years ago. Before that, it was only possible to get there in small boats because the village is surrounded by marshes. The village is still made of a few wooden houses, belonging to those who were monitoring the behaviour of the river, so it's impossible that 100 years ago, when the map was found, somebody could take it there.

AF: What was the next step? Has it been possible to make a scientific analysis of the stone?

AC: In the first place, right after the discovery of that stone, it was stolen and some fragments were lost for good. The slab fell into a river and the lost parts have never been found. Looking at photos of the map, it's evident that a part is missing. When we found it, it was intact. Anyway, with the help of local police we found the stone again and took it to the laboratories to examine it. I started to work on it with a team of mathematicians, archaeologists, philologists and physicists. We found out that the slab has three layers: the lowest one is dolomite, the central one is diopside and the uppermost one is porcelain.

When we faced problems during the analysis, we asked other institutions to help us. With the map being of a vast area, the first great problem was the palaeohydrological analysis, because there are no special-

ists who can process the data on the southern Urals. Part of the analysis was carried out in China, on the ideograms carved in the stone, the cartography principles and the porcelain on the surface. The goal was to understand the process the stone has gone through, given the Chinese connections we spoke of before.

AF: Can you explain the study of the map's layered materials in more detail? It could be a key to understanding the whole map...

AC: As I said before, the map has three layers. The first is a dolomite layer. The second is a diopside layer, on which the canals, the rivers and all that the map represents are carved. To avoid reflections, the diopside was covered with a layer of porcelain only two millimetres thick. It's the



Close-up of a section of the map, which is made up of three layers. The thin surface is porcelain. The method of manufacture is unknown, but Professor Chuvyrov is convinced that nanotechnologies were involved. (Photo courtesy of Professor A. Chuvyrov and *HERA Magazine*)

result of advanced technology. Why porcelain? The answer came from the Cartography Department of the University of Moscow.

To make a 3-D map, you need the surface to be white in colour and flawlessly modelled so that when you read it you can't be deceived by shadows and gleam. It's the exact way they do this kind of map today. It's surprising that this technology was already in use that far in the past. The dolomitisation process ended 250 million years ago. The fossilised shells are 180 million years old, and there is no way they could have been incorporated in the diopside layer later. Moreover, that kind of shell didn't exist in that area of the Urals.

We made chemical and X-ray analyses of the structure. We took dolomite samples from different parts of the map. Dolomite

is an extremely homogeneous material, but, in the map, dolomite layer quartz—which is normally present—was missing, and also magnesium silicate wasn't there.

We excavated in the Chandar area and took almost 10,000 samples of local dolomite, the analysis of which showed it wasn't the same dolomite as in the map. In such conditions it can't be fortuitous, so we can say that the dolomite layer is not homogeneous compared to the local dolomite and is 180 million years old. Even if it's so old, I think this is *artificial* dolomite—again, the result of advanced technology—for those who made it were able to prompt an artificial dolomitisation process, or at least they could bring dolomite clay from Western Europe to the Urals and process it.

The diopside layer is also not common, and shows a kind of nanostructure. The size of its crystals is 15 nanometres. It's astonishing, because I can't understand how they could do it. The diopside structure looks like a pudding with vertical insertions. Moreover, its microhardness is equal to that of corundum. Thanks to that fact, the relief map is still perfectly preserved, while the underneath dolomite layer is already breaking up.

To blend the dolomite layer with the upper diopside layer, the "creators" used the technique of replacing the silicon atoms of the diopside with the carbon atoms of the dolomite [from $\text{CaMg}(\text{SiO}_3)_2$ to $\text{CaMg}(\text{CO}_3)_2$], so that the two layers looked like they were welded. It's a nanotechnology that implies atomic-level accuracy. I'm a physicist and I know what I'm talking about. These people knew exactly what they were doing. I wouldn't know how to do it. The problems linked to the layers are mainly two: (a) how to make artificial dolomite; and (b) how to make nanostructures from diopside, because its melting temperature is 2,650°C. Only carbon has a higher melting point. We can speculate that they knew how to make these materials with a chemical method. Either way, the technology used is extremely advanced.

AF: Is this possible today?

AC: I don't think so! I'd like to remind you that dolomite is an accumulation

material, while diopside belongs to the pyroxenes, which are volcanic materials.

AF: Then the materials analysed show without any doubt a civilisation that knew how to use nanotechnologies?

AC: Yes, for sure.

AF: So you say the stone is a map. What makes you think it is?

AC: At the beginning we thought that the surface of the stone was simply cracked due to the old age or its natural structure. But when we started to look closer at those signs we now recognise as rivers, I found out that the right banks of the rivers were clear cut, while the left banks were more polished. That is what happens with "real" rivers because of the effect of Earth rotation and of Coriolis forces. So I looked at the edges of the canals to determine the direction of the rivers' flows. The fact is that Coriolis and Beer's laws have been discovered only in the last century. It has been a shock to realise that the map has been drawn according to those principles. Anyway, those two clues weren't enough to determine that what we had in front of us was a map.

A map is a mathematical system, so when I calculated the ratio between the height and the width of the stone, I found out that the tangent angle was 54 degrees, the same angle as Ufa's latitude. At that point the meaning of a certain sign on the map was clear. It represented a circle crossed by two tangents, and the angle between them was exactly 54 degrees. This gave me the key to calculate the exact latitude of the location drawn in the map, and from there to find out the mathematical system upon which the map was founded. And it matches perfectly to any of the recent maps of the area. The system used is neither Mercator's nor Gauss-Kluger's.

But to draw a map, you need not only cartography principles but also conventional signs, and we deduced them from the inscriptions. We understood that on the map were drawn 32 dams within a hydrographic system. This shows that the map was created by a civilisation that needed to control waters with dams—something like today's Holland.

AF: Let's talk about the dating. If that was a technological civilisation, to which time window shall we ascribe it?

AC: The dating of the map is extremely important. I would like to remind you that the dolomitisation of the Urals ended 250 million years ago and that the shells involved in the process were from the Gyroideae family, *Narcopsina celote* sub-family. Those shells appeared on Earth 180 million years ago and eventually died out some 60 million years ago. Here we have a time window within which the shells were put—beware: I say "put", not "fossilised"—in the map.

Then we have the archaeomagnetic measurements that show what follows: the edge of the map is oriented towards the magnetic pole, while the direction of the geographic pole drawn on the map is at an angle of 22 degrees from the magnetic



HERA Editor Adriano Forgiione (left) with Professor Alexander Chuvyrov during his visit to Rome for the interview. (Photo © HERA Magazine)

pole. We can find out the age of the slab through Hiebert's curve, which determines the position of the magnetic pole at a given time. If the calculations are right, the magnetic pole at the time of the map was in the Yamal Peninsula in Russia. And that happened 120 million years ago. The dating fits perfectly with the time window we spoke of before. If this is the case, the C-14 dating is pointless, because that test is not able to point out a date older than 46,000 years ago. In fact, the fossilised entrails of the shells have been carbon dated, but, because of their old age, the response was fruitless. Even the argon and uranium dating have proved unreliable.

The archaeohydrological analysis showed that 60 million years ago the water system was already as it is in the map.

Maybe one hundred years ago (when the stone first showed up) there existed a very smart geologist who could understand and apply the Coriolis law, knew how to operate

satellite imaging and dominated nanotechnologies and material chemistry. But if this were the case, he would have left notes and records for posterity, considering the enormous amount of work necessary to make it. We know about Plato, Leonardo da Vinci and other great minds of the past, but we know nothing about the creator of this wonder.

AF: Where was the analysis of the map carried out?

AC: Mainly in Ufa. It has been studied also by science history experts from Moscow, but the greatest help I had was from the Aerial Imaging Division of the Cartography and Geodesy Department of the University of Moscow. They particularly helped me understand the mathematical principles upon which the map was based.

AF: Your colleagues are all against you. How would you like to answer back?

AC: I know that happens, but I think this is something extremely positive. I'm happy to have raised this argument, but I would like also to warn my colleagues that they can't study this object only from the pictures, no matter how good and accurate they are.

If somebody criticises me I reply that I am a physicist, a well-known scientist from the University of Bashkiria, and I know how to think scientifically. I know how to carry out scientific research. I know how to do all this as well as those who criticise me. I know that this is an unclassifiable object in the human cultural landscape as we know it, but, no matter what, we owe it respect. I don't want to offend my colleagues, because only colleagues of mine could make this thing. Therefore, I ask for respect for the creator of this map.

About the Interviewer:

Adriano Forgiione is the editor of *HERA*, an Italian magazine which features ancient myths and legends, lost civilisations and archaeological mysteries. He is the author of *Science, Mystique and Alchemy of the Crop Circles* (HERA Edizione, February 2003).

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REVIEWS

BOOKS

Reviewed by Ruth Parnell

THE TERRACOTTA WARRIORS: The Secret Codes of the Emperor's Army by Maurice Cotterell

Headline Book Publishing, UK, 2003
ISBN 0-7472-7132-1 (298pp hc)
Availability: Headline, website
<http://www.headline.co.uk>,
<http://www.hodderheadline.com>

The world was awestruck at the discovery of a life-sized terracotta army of soldiers, horses and chariots unearthed near Xiyang village in Lintong province, China, in the mid-1970s. They were buried a few kilometres from the huge pyramid-shaped earthen mound—the legendary burial place of Qin Shi Huangdi, the first Emperor of a unified China who initiated the prosperous yet short-lived Ch'in Dynasty, ruling from 221 to his death in 210 BC. But why were 8,099 life-sized terracotta warriors, each weighing over half a tonne, buried there at all? To guard the emperor in the afterlife?

Engineer/scientist Maurice Cotterell, having decoded secrets embodied in Mayan, Egyptian and Peruvian artefacts, wondered whether esoteric secrets had been encoded in these terracotta artefacts—and sure enough, the more he looked the more he found. While archaeologists had already determined that the shape of the warriors' heads, faces and hairstyles corresponded to 10 shapes of the 10,516-character Chinese alphabet, Cotterell took the research further by analysing what the characters stood for and decoding a hidden message. In the placements of the warriors and the design of the pits housing them, he discovered numer-

ical keys to knowledge of solar physics and cycles as well as of God, time and the after-life. Intriguingly, he found similarities with astronomical and numerical keys decoded from the ancient Mayan, Egyptian and Peruvian artefacts—ones relating to Pacal Votan, Tutankhamun and Viracocha and thus begging the question of whether Emperor Qin Shi Huangdi was an equal among these ancient culture-heroes.

Cotterell has written extensively on these "supergods" in his previous four books, and gives a summary of those analyses in the appendices of *The Terracotta Warriors*. He presents his latest findings in the context of Chinese history, philosophy and mythology, making this a richly rewarding read.

YOU ARE G8, WE ARE 6 BILLION: The Truth Behind the Genoa Protests by Jonathan Neale

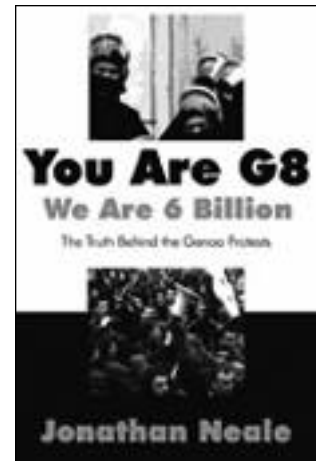
Vision Paperbacks, UK, 2002
ISBN 1-904132-13-8 (274pp tpb)
Availability: Vision Paperbacks, website
<http://www.visionpaperbacks.co.uk>

All too often the corporate media portray anti-globalisation protests and protesters in a savage light, without providing much analysis as to *why* the protests are taking place. Since the watershed Seattle protests against the World Trade Organization in 1999, there have been many more mass demonstrations aimed at this and other elitist structures including the World Economic Forum and the G8 industrial nations.

Seasoned UK socialist activist, union organiser, protester and writer Jonathan Neale was involved in organising the rallies and marches in Genoa, Italy, against the G8 meeting in July 2001, and this is his take on what went down, considering he couldn't be

in every hotspot at once. It's the story of a mass protest movement (300,000 people turned out for the July 21 march) against the forces that favour so-called "free" trade over "fair" trade at all cost—and the police who do their bidding (though the truth has since come out, damning police overkill against protesters). But it's also Neale's personal story with hands-on, in-your-face involvement, real people and political commentary.

To put the protests into context, Neale intersperses his narrative with chapters focusing on: poverty and aid (he lived in India as a teenager); AIDS in Africa; "Star Wars" and global warming; Middle East oil, dictatorship and war; and the new corporate order that's strangling workers and farmers the world over. He also reflects on the failures of communism and the weaknesses and strengths of today's anti-war movement, while encouraging more people to make a stand for a better, more equitable future. Challenging, yet with a hopeful vision.



REVIEWS



SPIN WAVE TECHNOLOGY

by George J. Bugh

Vasant Corporation, USA, 2002

ISBN 0-9716616-1-8 (262pp tpb)

Availability: Vasant Corporation, website
<http://www.vasantcorporation.com>

If you've ever had the perception that everything is in motion but is still at the same time, then you'll have a feel for standing waves and George Bugh's thesis on spin wave technology. This is the text version of the multimedia CD that introduced Bugh's theory, and is the result of his seven years spent investigating various devices exhibiting anomalous electromagnetic and electro-gravitic effects or claimed to have over-unity capabilities. Bugh is a Texan-born aerospace electronics engineer with over 20 years' experience in the field. His book is a collection of papers he's written on such choice subjects as classical versus quantum particle spin, the angular momentum of an electron, the thermodynamics of a magnetic hurricane, magnetic waves as the cause of gravity, and the nature of time and relativity.

At the basis of Bugh's theory is the idea that we live in a sea of electromagnetic standing waves; in fact, the universe of matter is full of them. Bugh maintains that the classical electrodynamics notion that all electromagnetically charged particles, like quarks and electrons, radiate energy away from gyroscopic precessional motions and orbital motions is essentially correct. But he goes further by suggesting that all particles are also absorbing just as much energy from all other radiating particles. The continuously absorbed energy equals the radiated energy and applies forces that move similar-type particles into harmonious precessional motions with each other. Sounds cosmic,

doesn't it? Well, Bugh maintains it's common sense, and that these particle spin interactions are possible even among compensating spins. What he's saying should be relevant to anyone who's wondering where their quantum physics grappling is leading them or who's trying to deglitch their latest free-energy or antigravity device.

Bugh explains that all sorts of technologies can be created based on these particle spin interactions, which is every encouragement for further research and development.

THE GOSPEL OF THE TOLTECS: The Life and Teachings of Quetzalcoatl

by Frank Díaz

Bear & Company, USA, 2002

ISBN 1-879181-86-X (230pp tpb)

Availability: Bear & Company, website

<http://www.InnerTraditions.com>;

Adventures Unlimited, website

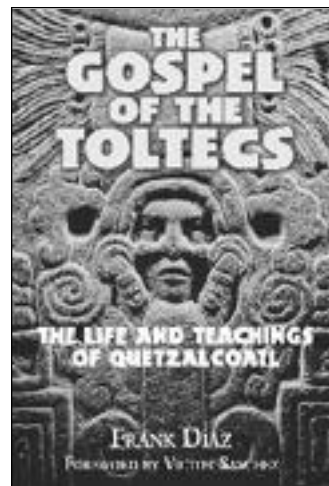
<http://www.adventuresunlimitedpress.com>

Cuban-born anthropologist Frank Díaz, who teaches out of Cuernavaca University in Mexico, specialises in shamanic studies, the Nahuatl language and Mesoamerican traditions including those of the Maya and particularly the Toltec.

The heyday of the Toltecs was between the 8th and 12th centuries AD, but, despite their decline 300 years before the Spanish arrived in Mexico in 1521, their spiritual legacy is being kept alive today by their descendants. As Victor Sanchez (who has written several books about the Toltecs) highlights in the foreword to Díaz's book, *Gospel of the Toltecs*, the Toltecs and Maya had a spiritual leader in common: Ce Acatl Topiltzin, or Quetzalcoatl—symbolised by the feathered serpent that represents the essence of duality and the potential for unity. The Toltec

leader, according to this version, was born in AD 947 and was a key figure in the development of Toltec culture.

Díaz doesn't introduce his study (though he does reference it), so it's up to the reader to dive in regardless and become immersed in this rendition of the life and teachings of Quetzalcoatl—a story that has remarkable correspondences with the accounts of Jesus, Buddha and Krishna. The gospel's chapter headings, such as "Prophecy of Hueman the Elder", "The Soothsayer Fish", "The Enigmas of the Serpent", "The Crossroads" and "The Priests of the God of Death" give an inkling of what's in store ancient wisdom-wise. Each chapter is headed by a Toltec glyph that illustrates something of the message. Díaz's sources include the oral tradition of descendants, extant Nahuatl and Maya codices and Spanish chronicles. These are wise, ancient words with a hint of familiarity with other great world religions.





REVIEWS

WITHOUT CONSENT: Extraterrestrial Contact and Alien Abduction in the UK

by Carl Nagaitis and Philip Mantle

Beyond Publications, UK, 2002

ISBN 1-903782-02-3 (261pp tpb)

Availability: Beyond Publications, website

<http://www.beyondpublications.com>

The alien abduction phenomenon is by no means confined to the United States but is reported worldwide. UFO researcher/author Philip Mantle and freelance journalist Carl Nagaitis first put out this book in 1994, in the days before the TV series *The X-Files* took the mystery into the wider world and grabbed the public imagination. However, their intention was to show that the phenomenon happens in the UK as much as anywhere else, and that a range of sane if not ordinary people have had extraordinary experiences involving alien beings.

Not having seen the original book, I can't really judge how much of the content is new, but there seem to be two fascinating and thoughtful additions circa mid-1990s as well as a new introduction from Nagaitis that tempts with the story of the airline executive with a mysterious metal implant. There's also a foreword from Nick Pope, the former British MoD bureaucrat who staffed the Secretariat (Air Staff) desk in 1991–94.

Pope confides that it was enough for him to persuade sceptical MoD elements to take UFO sighting reports seriously, let alone try to convince them that members of the public were reporting they'd had close encounters with ETs, often in situations involving strange surgical and even sexual procedures. He didn't want the entire field of ufology to be perceived as a joke by the MoD, the military and the scientific community. Pope

says that in his official and private work he's had dealings with around a hundred abductees, so he's in a special position to be open minded. He goes so far as to suggest that, because these abductees claim to have been taken against their will, their abductors may be guilty of crimes against humanity.

The abductees featured in *Without Consent* may have learned to cope with, if not gained rewarding insights from, their experiences, but most of them just want answers to what happened to them. Their remarkable stories, going back to the 1950s, are presented sympathetically and compellingly.

THE GENESIS AND GEOMETRY OF THE LABYRINTH:

**Architecture, Hidden Language,
Myths and Rituals**

by Patrick Conty

Inner Traditions, USA, 2002

ISBN 0-89281-922-7 (298pp 1/f tpb)

Availability: Inner Traditions, website

<http://www.InnerTraditions.com>

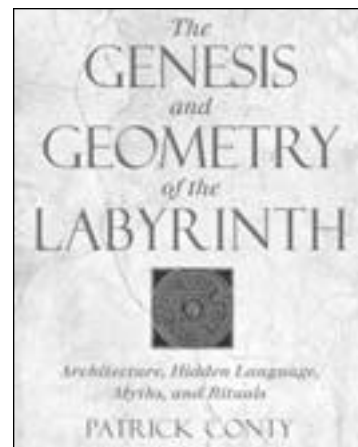
Make no mistake, there's meaning in them thar myths. And one with a certain mystique is the Cretan myth involving the labyrinth, with its hero and minotaur. But what's the meaning behind this sacred symbolic interplay and territory? What actually does the labyrinth delineate? Could it be that it's a map that can liberate the mind? Suddenly it twigs that the action of moving meditatively around the twists and turns of a selectively sited sacred labyrinth can produce harmonious brain-waves. Such patterns can be found in the artefacts of so many ancient cultures, but there had to be a reason why, and this is the question that author Patrick Conty ably explores in *The*

Genesis and Geometry of the Labyrinth.

It's uncanny how many times labyrinths have cropped up in my purview of recent times, which of course has to be a sign! I've heard about portable labyrinths being taken into prisons to serve as walking contemplation templates—configurations for wholeness—for the prisoners. So I have no hesitation in recommending Conty's book for anyone keen on investigating the enigmas, geometries and gestalts of the labyrinth.

Connecting with the labyrinth links you into an ancient cultural memory via a quantum crossing that can also propel you into another dimensional reality. Not surprisingly, knot theory is a modern mathematical tool for decoding the hidden language of the labyrinth as much as the ancient Celtic knot designs, and Conty provides rich illustrative examples of these amazing forms.

The more I discover about the labyrinth's transformative powers, the more I think every town should have one. The message: revelation through circumambulation!



REVIEWS



SAVE ISRAEL!

by Barry Chamish

Modiin House, Israel, 2002

ISBN pending (387pp tpb)

Availability: Modiin House, Nakhal Zohar

St 40/2, Modiin, Israel 71700,

tel/fax +972 8 972 0804,

email chamish@netvision.net.il

Barry Chamish is a controversial Israeli "conspiracy" researcher and commentator who seems to have more popularity on the Internet than at home, though he assures us this is changing. In recent years he's been doggedly trying to convince people there was an alternative plot behind the assassination of Yitzhak Rabin, and he's been developing a case for a new investigation.

This is risky business, as Chamish makes damning assertions that no one power group would want broadcast—not the Israeli establishment, nor certain Palestinian officials, nor the Vatican, nor European and American elites, especially key members of the Bilderbergs and the Council on Foreign Relations whom he regards as "corrupters of the Jewish nation". And certainly not the CIA, as here he expands on his findings that the US agency, in collusion with the Israeli Shabak, trained PLO snipers whose targets weren't only to be Hamas and Islamic Jihad terrorists but Israeli politicians and citizens.

Chamish makes many shocking revelations, and in a tone that's often brash and caustic, reflecting his take on some of the ugly scenarios he describes. He has little sympathy for the Palestinian Arabs or their cause, and certainly none for the PLO, which he maintains is excavating under the Temple Mount, looking for ways to blackmail the Vatican and make gains in world diplomacy. But they're not the only ones, as

it looks like the Knights Templar are also trying to reclaim their stake in this sacred site! Chamish has only horrors to speak of "the cabal of hidden American and European rulers out to get Israel". From what he's saying, there are more routes on the Middle East "road map" than are generally presumed, and peace is not part of the itinerary. Chamish's book is bound to disturb people on all sides of the debate.

THE SECRET LAND 2: JOURNEYS INTO THE MYSTERY

by Gary Cook

StonePrint Press, New Zealand, 2002

ISBN 0-9582040-8-X (200pp tpb)

Availability: StonePrint Press, website

<http://www.stoneprint.co.nz>

This second book in New Zealander Gary Cook's *Secret Land* series is a captivating collection of writings first published in the magazine *Rainbow News* between August 1997 and November 2001. Titled *Journeys into the Mystery*, they explore his travels to and experiences in sacred places in New Zealand's North and South Islands, as well as a couple of forays into key ancient sites in England and Canada.

Cook, a researcher, health professional, businessman, explorer and author who also heads up a group called the United Cultural Convention, has a passion for getting to the core of New Zealand's hidden history. His links with various tribal elders, including the people of Waitaha—who trace their *whakapapa* or genealogy back through 67 generations—helped facilitate his visits to a number of sacred places. His main mission is to reconnect with the spirit of *tangata whenua*, the first people of the land who may in fact have comprised a collection of races, even

preceding the arrival of the first Maori tribes. Indeed, his every move seems to be heralded by sacred natural omens.

He writes of his expeditions to the Kaimanawa Wall, an hour's drive from Taupo in the central North Island, to the star maps of Maunganui Bluff in Northland, as well as to the sea gardens at Punakaiki and the greenstone trail in the South Island. He uncovers maps written in stone, charts powerful standing stones marking out ley lines, and senses the cosmic sonic properties of the imposing limestone tor, Castle Hill—an ancient gathering-place of learning and wisdom. Gary Cook is part of a new wave of researchers, historians and anthropologists who are rewriting the mainstream version of NZ "prehistory". He imparts a special atmosphere in his travelogues, supporting each chapter with at least one stunning colour photograph (if only there were more!). I can hardly wait for the video!





REVIEWS

DREAMING WAR: Blood for Oil and the Cheney–Bush Junta by Gore Vidal

Thunder's Mouth Press/Nation Books, USA, 2002; Clairview Books, UK, 2003
ISBN 1-56025-502-1 (197pp tpb, USA),
ISBN 1-902636-41-4 (197pp tpb, UK)
Availability: Thunder's Mouth Press, website <http://www.thundersmouth.com>;
Clairview Books, www.clairviewbooks.com

This latest collection of essays from "dissident patriot" American author Gore Vidal follows hot on the heels of *Perpetual War for Perpetual Peace* (see review, 10/02). In *Dreaming War*, he continues those themes with 11 essays spanning the last decade. In the most recent, a lengthy essay dated November 2002, he focuses on the unanswered questions before, during and after the September 11, 2001, terrorist attacks on the World Trade Center and the Pentagon. Not that he can answer all those questions, but he does some stern finger-pointing at the Cheney–Bush junta and its push to control Caspian gas and Iraqi oil.

Since the publication of this collection, the United States, with backing from its allies the UK, Australia and Poland, has already waged war to "liberate" Iraq—an inevitable action according to Vidal's reading between the lines of recent history. His first essay, from January 2001, is on the theft of the US Presidency in Florida and it sets a prophetic tone for Vidal's takes on the theft of democracy, truth and human rights through the domestic and foreign policy landscapes of the US in the last century.

To Vidal, the Cheney–Bush cabal is the latest and most cynical group of strategists hell-bent on US empire-building—as we've seen in Afghanistan and now in Iraq—and

the corporate media have done its bidding in distorting truth and slanting public opinion. Vidal has his own horror stories to tell about hostile journalistic treatment.

Vidal (and a few other writers and researchers he quotes, such as Nafeez Mosaddeq Ahmed, whose book we featured in 9/05) suggests an alternative perspective on US motivation for the "War on Terror" and is brave enough to declare that the emperor is wearing no clothes. In the final piece, a recent interview conducted by Marc Cooper, Vidal lashes out at the evil deeds and deceptions of a succession of US governments and chides the US public for being fooled by this latest massive con. Rivetting!

THE PARTY'S OVER: Oil, War and the Fate of Industrial Societies by Richard Heinberg

New Society Publishers, Canada, 2003
ISBN 0-86571-482-7 (279pp tpb)
Availability: New Society Publishers,
website <http://www.newsociety.com>

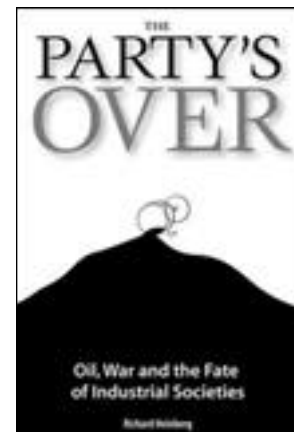
Richard Heinberg's book provides a much-needed reality check on where our fossil-fuel-consuming industrialised society is headed—and it's not towards prosperity but collapse. (Readers may recall Richard's article, "A History of Corporate Rule and Popular Protest" in NEXUS 9/06.)

Rather than relying on the data from economists, environmentalists and politicians, Heinberg places much more credence on analyses from petroleum geologists including Colin Campbell (see NEXUS 10/01). The fact is that the peak of global oil extraction will probably be reached between 2006 and 2015, and with it the peak in gross energy production from all sources, heralding an energy-led collapse of the global economy

and the electricity grids. The party is just about over. The industrialised world and all that we've become so accustomed to—primary production, manufacturing, service provision—will go through major upheaval.

Heinberg (a biodiesel enthusiast) argues that even if a switch to alternative energy sources were implemented today, industrial societies will not have sufficient energy available to satisfy existing or growing demand. We're about to enter a new era—one that must be less energy-consuming, less fast-paced and more sustainable. We should have started managing this transition in the early 1970s, so now it's urgent that we implement ways to cope with the imminent decline of oil resources and develop strategies to survive the crisis. In this regard, Heinberg makes many positive suggestions.

Unfortunately, the American way—considering the US has consumed so much of its own natural resources—is to secure access by force to the second-best supply of the world's most dwindling resource...in Iraq.



REVIEWS



HEALTH BETRAYAL: *Staying Away from the Sickness Industry* by Eve Hillary

Synergy Books, Australia, 2003
ISBN 0-9750594-0-8 (243pp tpb)
Availability: Synergy Books Pty Ltd, tel
+61 (0)2 4388 9533, email
evehillary@smartchat.net.au

Australian nurse and natural healthcare professional Eve Hillary outlined her experiences with multiple chemical sensitivity in her 1997 book, *Children of the Toxic Harvest*, and 2000 video, *Healing the Toxic Domain* (reviewed in NEXUS 4/04 and 8/06). With the help of a rare doctor who did not see her health problems as psychological, she managed to treat her condition, which was caused by exposure to OP pesticides on the family farm in the 1980s. Ever since, she has been a staunch advocate of healthy living and an opponent of the so-called "sickness industry".

In *Health Betrayal*, Eve expands on her earlier themes with details of her battles with the Australian health and chemical authorities, media apologists and "experts", and on the industries that profit at the expense of human and animal health. She highlights the plight of doctors and therapists who are promoting wellness but are subjected to unjustified harassment because of their practices. She despairs at how globalised farming, genetically engineered food and mass vaccinations are being foisted upon the public to the detriment of personal, social and environmental health, and backs up her stance with some frightening facts.

Eve gives the UN Codex Alimentarius a serve, explaining how its rulings are putting our health freedoms under siege and pandering to the hidden agendas of transnational

food and drug corporations. She also rails against the health horrors of depleted uranium weapons used in the Gulf War, in the Balkans, in Afghanistan and now Iraq.

But Eve Hillary also delivers a positive message with suggestions for how we can bring on a "wellness revolution" by making a difference in small ways—from choosing to eat organic food and lobbying our supermarkets not to stock GE food, to throwing out toxic household products and doing our own research. She urges us to empower ourselves by becoming better informed.

SOLOMON – FALCON OF SHEBA: The Tombs of King Solomon and the Queen of Sheba Discovered by Ralph Ellis

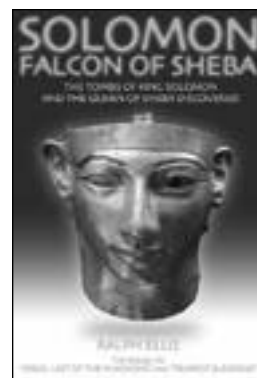
Edfu Books, UK, 2002, AUP, USA, 2002
ISBN 0-9531913-4-6 (384pp tpb, UK),
1-931882-12-6 (384pp tpb, USA)
Availability: Edfu Books, website
<http://www.edfu-books.com>;
Adventures Unlimited Press, website
<http://www.adventuresunlimitedpress.com>

Taking up where he left off with *Jesus, Last of the Pharaohs* and *Tempest & Exodus* (NEXUS 6/04, 9/02), Ralph Ellis asks why the biblical archaeological record can't account for the true history of the Queen of Sheba, supposedly of Ethiopia, and the apparently Israelite King David and King Solomon. Wondering why the burial places of these ancient monarchs have not been confirmed, Ellis went in search of their tombs and sarcophagi and concludes that these key figures had Egyptian origins.

According to Ellis, King David of Israel was actually the 21st dynasty (c. 990–970 BC) Egyptian Pharaoh Psusennes II, and

when crowned he presided over a united Egypto-Judaean-Israelite empire—which is somewhat at odds with the officially sanctioned version of history. Having analysed the correlations between the biblical and historical records, Ellis proposes one theory that the Queen of Sheba was a princess from Lower Egypt whose hand was given in marriage to David's son, the Judaeo-Israelite King Solomon—an arrangement that suggested Solomon had a close relationship with her pharaonic family line.

Ellis delves into the meanings behind various Egyptian and Hebrew terms in his quest for the truth. He concludes that the Queen of Sheba was actually the Queen of the Sabbath day and had a role as Queen of the Great Pyramid (Mt Sinai); thus, as the Hyksos-Israelite god was considered to live inside the Pyramid, she was regarded as having the position of the Wife of God. Ellis's thesis requires much focus and isn't easily explained in a short review. Nor is his final assertion that the whole of Judaic, Christian and Islamic belief systems and iconography were based upon Egyptian antecedents.





REVIEWS

WHY AMERICA'S CHILDREN CAN'T THINK: Creating Independent Minds for the 21st Century

by Peter Kline

Inner Ocean Publishing, USA, 2002
ISBN 1-930722-10-9 (385pp tpb)
Availability: Inner Ocean Publishing,
website <http://www.innerocean.com>

Peter Kline deserves praise for making several points just in his introduction. Firstly, he laments that teachers are restricted from using their wisdom as their life



experience tells them it should be used—and if you know any talented teachers restricted by the system, you'd know what he means. Secondly, he stresses the importance of having a sense of history—in science, mathematics, the arts—yet points out that because history changes as new discoveries and interpretations are made, we must be wary about making false assumptions.

Our postmodern society is changing to the point where anything you learn will be out of date by the time you learn it. Your best bet, according to Kline, is to chart your own unique path through the information jungle while being able to develop a meaningful relationship with it—to be free to explore it in a subjective manner. This attitude is fundamental to Peter Kline's philosophy about the education of children today—and we adults can find inspiration in this, too. If you ever entertained a really big idea as a little kid and yet strangely have never forgotten it, indeed have striven to achieve it over the years, then that idea/feeling/passion should be nurtured. Likewise, such creative spark needs to be kindled in children.

Kline, who has over 30 years' experience as a teacher and learning skills specialist, argues that reading not just for comprehension but in the light of personal interpretation is one of the keys to encouraging children to have the creative, independent minds that will be demanded of them in tomorrow's information age. And if we're going to over-

come the seeming growing literacy challenges, we need to understand how the brain learns to read text and decode the "mystery and miracle of language".

Why America's Children Can't Think is an educational excursion into exciting new possibilities for teachers, parents and children.

MOTHERS: PREVENT YOUR DAUGHTERS FROM GETTING BREAST CANCER

by Sherrill Sellman

GetWell International, USA, 2002
ISBN 0-9750487-0-8 (359pp tpb)
Availability: GetWell International, website <http://www.sellman.com>

In her new book, women's health advocate, educator and author Sherrill Sellman (*Hormone Heresy*) explains that breast cancer is a preventable disease. One of her focuses here is to address the growing rate of breast cancer in young women in their 20s and 30s and explore what could be responsible for this rise. The real-life stories she presents are extremely poignant.

Sherrill writes at length about the endocrine disrupters and oestrogen mimics that have found their way into the environment and living creatures (including us) and their carcinogenic and genetic effects. She examines the risk factors associated with synthetic hormones including oestrogen and progestin—now regarded by the US EPA as carcinogens—and laments that young teenage girls are being prescribed the Pill just to treat acne. Her list of vitamin/mineral imbalances the Pill causes—let alone its environmental effects—is an eye-opener.

This chemical sea that has flooded our daily lives is implicated in the growing rates of birth defects in boys and "precocious puberty" in girls as young as seven—and, again, more heartfelt case studies strike home that we really have major problems on our hands that require urgent remedial action.

While the book's title is aimed at mothers and their daughters, the information is still relevant for fathers and sons. We can do much to make our bodies and our environments healthy enough so as to reduce cancer susceptibility, and Sherrill gives great advice on removing toxins from the home, sugar from the diet and synthetic hormones from the medicine chest—and replacing these toxic substances with safe alternatives.

Sherrill encourages mothers to keep a check on their own and their daughters' hormonal and breast health. Intrinsic to this motivation, though, is that women and girls appreciate the female body as a vessel of wisdom and menstruation as a powerful connection with the body's natural rhythms.

Sherrill herself is a font of knowledge and wisdom, and her book is a must-read.

REVIEWS



BOOKS

Reviewed by Ruth Parnell

FLOOD YOUR BODY WITH OXYGEN: Therapy for Our Polluted World

by Ed McCabe

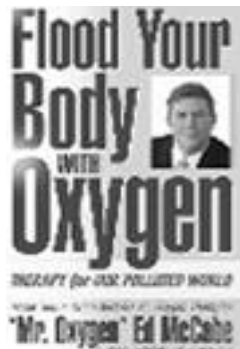
Energy Publications, USA, 2003 (5th ed.)
ISBN 0-9620527-2-8 (593pp tpb)

Availability: From website

www.floodyourbodywithoxygen.com or
Progressive Promotions Pty Ltd., 9

Tradeway, Kilsyth Vic 3137 Australia.

Tel: 03 9720 6619; Fax: 03 9720 6095



One of our pet topics over the years has been Oxygen Therapies, and one of the great popularisers out of the USA has been journalist Ed McCabe, aka "Mr Oxygen". His first book, *Oxygen Therapies: A New Way of Approaching Disease*, was an international bestseller by word of mouth, and videotapes of Ed's lectures have been very well received (see reviews in NEXUS 2/02, 2/09, 2/12). Now he's released *Flood Your Body with Oxygen* (the fifth edition thereof, though we haven't sighted the first four). It's a major update on his first book and a must-have for anyone looking for ways to improve their own health and that of their family and even their pets and their plants.

At the basis of this therapy is the observation that disease micro-organisms are anaerobic, i.e., they thrive in an oxygen-depleted environment, yet they can be annihilated in oxygen-rich conditions. Of course, oxygen can't be patented, so the proliferation of oxygen therapies is indeed a threat to the medical/pharmaceutical industry. Matters came to a head in McCabe's life in 1998 when he was suddenly imprisoned for 18 months on trumped-up tax violation charges. But he's not the only person to promote oxygen therapies and incur the wrath of the medical authorities and corporate media.

In this massive book, Ed looks at oxygen therapy science, history, medical evidence, protocols, uses, practitioners and politics, and reviews a wide range of related resources. Highly recommended.

CD-ROM

Reviewed by Duncan Roads

GRIDPOINT™ 3.0 – The World Grid Mapping Program

Quark Enterprises Ltd, New Zealand, and Harmonitech, USA © 1993–2003

(5-disc set; minimum system requirements: IBM-compatible PC with Intel Pentium processor, MS Windows 95 or higher, 32MB RAM, 20MB hard drive space; monitor resolution 800 x 600 or higher)

Availability: **New Zealand**—Bruce L. Cathie, Quark Enterprises Ltd, tel +64 (0)9 818 4291, email brucelc@ihug.co.nz, Gridpoint website, <http://homepages.ihug.co.nz/~brucelc>; **USA**—Rod Maupin, Harmonitech, tel +1 (360) 446 1050, email gridman144@msn.com

Gridpoint™ (formerly Gridworks) allows users to calculate relationships and positions of points on the Earth's surface. Its most popular use is for the calculation of sites on the planet's energy grid.

All the top-secret bases that matter are on this grid system, as are most ancient mystery sites. If you want to know more about this subject, read Bruce Cathie's excellent books.

This latest CD-ROM version is a major update on the old floppy disk days. It has five CDs which give precise data for plotting whatever part of the world grid you want.

It would help enormously if you've read Bruce Cathie's books, but the program has a Quick Start Guide just for beginners.

PRODUCT

Reviewed by Duncan Roads

SAFE-T-FONE

by Safe-T-Fone P/L, Victoria, Australia
Price: A\$29.95 inc. GST and p&h in Aust
Availability: NEXUS offices; Australia—
PO Box 30, Mapleton Qld 4560, tel (07)
5442 9280, fax (07) 5442 9381, website
<http://www.nexusmagazine.com>

If you've been looking for a device that can protect you from electromagnetic fields and radiofrequency waves when you use your mobile phone, then look no further.

The Safe-T-Fone comprises an earpiece attached to the phone via a plastic tube. It has no wires, speakers or antennae that you need to be shielded from, and there are no transmitters or receivers involved, making it a safe option. The earpiece and cord/tube can easily be disconnected from the phone. The product is inexpensive, fits all brands of mobile phone and comes in four colours (red, blue, yellow and clear/white).

We think it's so good, we've decided we should sell it through the magazine!



REVIEWS

MUSIC

Reviewed by Richard Giles

YOL BOLSIN

by Sevara Nazarkhan

RealWorld Music, USA, 2003 (57mins)
Distributors: **Aust**—MRA Entertainment, tel (07) 3849 6020; **UK**—Real World Records, tel 0208 964 6000; **USA**—Narada, tel (414) 961 8350, website <http://www.realworldrecords.com>

This is the first CD of Uzbekistan music we've reviewed and it's a significant treat of evocative, timeless songs from the Uzbek culture with its tradition of putting poetry to music. There are love poems, songs praising the young bride, sacred verses, songs of spring and children's growing songs. All are backed by Central Asian instruments, both traditional and modern. Sevara Nazarkhan, whose instrument is the doutar, a 15th-century two-stringed lute, has created a fascinating musical portrait of her homeland. Definitely a collector's album.

EMBRACE

by Deva Premal

Prabhu Music, USA, 2002 (56mins)
Distributors: **Australia**—New World Music, tel (02) 9565 4522, **USA**—Prabhu Music, website <http://www.MitenDevaPremal.com>

Deva Premal, in cooperation with her partner Miten, has taken the chanting world by storm with her devoted, lyrical, heartfelt renderings of traditional sacred chant music from India and Tibet. The reciting of sung or spoken mantra is undergoing an experiential revival in the West, and Deva Premal is one of the key exponents. This beautiful, engaging mantric singing, backed up by musicians on traditional and modern instruments, thrills your inner light. A transcendental album.

MOROCCAN GYPSIES

by Sidi Mimoun and Ben Souda

ARC Music Prodn, UK, 2002 (74mins)
Distributor: **UK**—ARC Music, tel +44 (0)1342 328 567, website <http://www.arcmusic.co.uk>

The Gypsies originated in northern India, making their way into the Mediterranean region and throughout Europe. In Morocco, gypsies call themselves Dom (from *domari*, meaning "man"). Many live a musical lifestyle, performing or entertaining for their living. These two groups, Sidi Mimoun and Ben Souda, have made their name in Europe since the 1970s at international music festivals. On this CD, they play music from street festivals, weddings and celebrations as

well as spiritual exaltation pieces. Exciting Gypsy/Muslim Moroccan music.

RUMBA FLAMENCO

by various artists

Putumayo, USA, 2002 (47mins)
Distributors: **Aust**—MRA, tel (07) 3849 6020; **UK**—Pinnacle Imports, tel 01689 870622; **USA**—Putumayo, tel 1888 7888 8629, <http://www.putumayo.com>

A soulful collection Spanish flamenco with influences of salsa, gypsy rumba, rhythm and pop that integrates the modern upbeat influence of groups like The Gypsy Kings. The rumba style originated in north-eastern Spain and southern France and fuses the passion of traditional flamenco with Cuban son and salsa rhythms. Featured on this Putumayo album are Ziroq, Gitano Family, Eric Fernández, Chico and the Gypsies, De Madera, Wafir, Javier Ruibal and more. Passionate, Latin gypsy sounds.

REZOS

by Bobi Céspedes

Six Degrees, USA, 2002 (47mins)
Distributors: **Aust**—MRA, tel (07) 3849 6020; **UK/USA**—Six Degrees Records, <http://www.sixdegreesrecords.com>

I was taken by the divine Earth-motherly face of Bobi Céspedes on the *Rezos* cover, and her music certainly did not disappoint me. Bobi is a priestess in the sacred Yoruba religious tradition that Cubans call Lucumi; it preserves original African elements that make up all of their music. As a girl, Bobi led the singing to the Orisha deities (the forces of nature), and continued her sacred singing after she left for the USA in 1959. In the 1990s she sang with Mickey Hart's Planet Drum (see review in NEXUS 6/03), which brought her to international prominence. This is a very beautiful mix of old Cuban/African sounds with modern, funky, organic, laid-back rhythms.



Continued from page 14

1. psychology (heavy metal effects).

Many individuals with known exposures still have not received requested care. As stated on March 10, 2001, by Dr Michael Kilpatrick, US Department of Defense, only 60 individuals (including myself) are receiving minimal medical care from physicians assigned to the Baltimore, Maryland, Department of Veterans Affairs Depleted Uranium Project. That includes only a fraction of over 350 individuals with verified exposures.

Today, I and others must take antibiotics and steroids to control medical problems. It is impossible to get proper care and treatment. If the authorities do not provide medical assessment for those with verified exposures and health problems, then they can say DU did not cause any adverse health problems because they never saw any health effects. So much for medical science when a cover-up is directed by politicians to limit liability.

The cover-up started with the infamous Los Alamos memorandum sent to our team in Saudi Arabia during March 1991. This memo told us to be sure that we should

only report our findings so that DU munitions could always be used. *In other words, lie!*

The letter sent to General Leslie Groves during 1943 is even more disturbing. In that memorandum, dated October 30, 1943, senior scientists assigned to the Manhattan Project suggested that uranium could be used as an air, water and terrain contaminant. According to the letter, sent by the Subcommittee of the S-1 Executive Committee on the "Use of Radioactive Materials as a Military Weapon", inhalation of uranium would result in "bronchial irritation coming on in a few hours to a few days". This is exactly what happened to those of us who inhaled DU dust during Operation *Desert Storm* and to US soldiers in the Balkans.

The subcommittee went on further to state that:

"Beta-emitting products could get into the gastrointestinal tract from polluted water, or food, or air. From the air, they would get on the mucus of the nose, throat, bronchi, etc. and be swallowed. The effects would be local irritation, just as in the bronchi, and exposures of the same amount would

be required. The stomach, caecum and rectum, where contents remain for longer periods than elsewhere, would be most likely affected. It is conceivable that ulcers and perforations of the gut followed by death could be produced, even without any general effects from radiation."

Today, medical problems continue to develop. Medical care is still being denied or delayed for all uranium-exposed casualties, while United States Department of Defense and British Ministry of Defence officials continue to deny any correlation between uranium exposure and adverse health and environmental effects. They contend that they can spread radioactive waste (uranium-238) in anyone's backyard without cleaning it up and providing medical care. *Their arrogance is astonishing!*

Based on all previous research and the DU Project, what were the recommendations?

The DU Project and review of previous research reinforced our original 1991 conclusions and recommendations that:

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1. All DU contamination must be physically removed and properly disposed of to prevent future exposures.

2. Specialised radiation detection devices that detect and measure emissions of alpha-particles, beta-particles, X-rays and gamma-rays at appropriate levels from 20 dpm up to 100,000 dpm and from 0.1 mrem/hour to 75 mrem/hour must be acquired and distributed to all individuals or organisations responsible for medical care and environmental remediation activities involving depleted uranium/uranium-238 and other low-level radioactive isotopes that may be present. Standard equipment will not detect contamination.

3. Medical care must be provided to all individuals who have (or may have) inhaled, ingested or had wound contamination, to detect mobile and sequestered internalised uranium contamination.

4. All individuals who enter, climb on or work within 25 metres of any contaminated equipment or terrain must wear respiratory and skin protection gear.

5. Contaminated and damaged equipment or materials should not be recycled to manufacture new materials or equipment.

What has occurred?

Visual evidence, personal experience and published reports verify that:

1. Medical care has not been provided to all DU casualties.

2. Environmental remediation has not been completed.

3. Contaminated and damaged equipment and materials have been recycled to manufacture new products.

4. Training and education has only been partially implemented.

6. Contamination management procedures have not been distributed and implemented.

What should happen next?

All citizens of the world must raise a unified voice to ban the future use of depleted uranium munitions and force those nations that have used depleted uranium munitions to recognise the immoral consequences of their actions and assume responsibility for medical care and thorough environmental remediation.

There is a famous quotation, "And a child shall lead them". But if the children are sick or dead and the citizens of the world permit this to continue, then there will not be a child who can fulfill the prophecy and lead us to peace. *I implore you to act!*

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To see more of Dr Rokke's writings on Gulf War casualties and depleted uranium, visit the Traprock Peace Center website, <http://www.traprockpeace.org>.

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mineral imbalance compromises the brain's ability to deal with low-frequency infrasonic shocks.

In part one, we saw how pockets of intensive infrasound can be geographically correlated with the TSE cluster locations. Recent research conducted by Mariana Alves-Pereira (Department of Environmental Science, New University of Lisbon, Caparica, Portugal) has identified the symptoms and biochemistry of low-frequency noise damage, where the symptom profile—involving hypersensitivity to sound, reclusive behaviour, aggression, paranoia, cardiac complications, etc.—is near identical to some of the clinical features of TSEs. Furthermore, the well-known metabolic association between the healthy prion protein and the actin and melanin proteins, plus the fact that actin and melanin play a crucial role in the absorption of incoming vibro-acoustic waves, may offer support for the suggestion that TSEs result from a metal-deformed prion protein and the subsequent breakdown in the brain's ability to deal with low-frequency noise.

Governments and corporations have deliberately conspired to manipulate what the public get to hear surrounding the causes of TSE—

not to mention the causes of so many other modern ailments. Their concealment of the whole truth is betrayed by the fact that the UK's BSE Inquiry team was debarred from accessing 30% of the government's data on BSE—because it was "classified" under the Official Secrets Act.

Never before in the history of human medicine has the populace on a global scale been so successfully indoctrinated by the healthcare propaganda of the multinational and governmental lobbyists. A mere handful of ministers and corporate-controlled advisers have served as traitors to their own people and planet. Their deviant behaviour should be treated as criminal negligence.

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NB: For additional references, refer to the "Cattle Practice" article on Mark Purdey's website, <http://www.markpurdey.com>.

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Mark Purdey is a traditional mixed family farmer in the UK who successfully defeated the UK government's compulsory insecticide treatment order in the High Court of London in 1984. He writes, lectures and broadcasts on environmental health issues, whilst pioneering global ecodetective investigations into the causes of brain disorders, such as BSE. Mark's analytical studies have identified some "common toxic denominators" involved in the cause of BSE, and his published hypothesis is currently gaining support from studies conducted at US, Japanese and European universities.

The full text of Mark's article can be found on his website, <http://www.markpurdey.com>. It was originally published as "Educating Rida"—"Rida" being the Icelandic term for transmissible spongiform disease (TSE).