



Science for Peace

The Bulletin

September 2004

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The Basis of Peace is the Security of the Commons

by Theresa Wolfwood
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Introduction

“In order to understand a thing, one must change it.” Maria Mies

“Maintaining a culture of peace requires an economic solution.” Albino Forquilha

Peace Education is the matrix of the work of activists in social movements and is a personal commitment best described as example, example, and example. It is our task to be that example, to work and educate ourselves so we can be effective in our communities and the world. We must connect all the issues of peace to life; relate our longing for peace to the longing for justice, equity and dignity for all. Our work includes the constant articulation and examination of our vision of a peaceful world. It is how we construct that connection that we address ourselves to here today.

Educating Ourselves To Educate Others.

Herbert Marcuse said: **“the success of the dominant ideology is to make unthinkable the possibility of alternatives.”** Our first task is to overcome the dominant ideology that war and injustice are inevitable, that human nature is violent and warlike. That is a fallacy. Most people live their lives in peace and settle disputes without violence in their family and community life.

For people to accept policies of violence, leaders have to appeal to greed and fear as they resort to lies, half-truths and demonization of the other, blatant manipulation of patriotism and cultural differences, in other words, propaganda.

Appeals for unity and support by leaders mean that they do not want to deal with internal problems of injustice. Leaders want the powerless to fight and die for them and their benefit. They use the threat of an external enemy to perpetuate the status quo that reinforces their power and coercion and the threat of punishment to force men (mainly) to join the killing brigades. Our societies call cowards those who refuse to fight and kill.

Our education systems reinforce this ideology. School history is full of battles, brave leaders, great victories and the right to the loot of war. Militarism is a given—an accepted part of our life. Today politicians use the greatest modern tool of education or brainwashing, depending on your persuasion—television—to “educate” us all in the glory and inevitability of violence. Religious leaders, all who profess love and peace, endorse and bless violence at times of conflict.

Militarism is more than guns; it is an addiction to force, to the idea that might is right, whether in the home or the world. Militarism is such an inculcated addiction that we do not see it in our daily lives. Why do we decorate and honour those who kill? Why do we greet important visitors with an “honour guard” of armed soldiers, rather than a guard of children,

street cleaners or nurses—the people who represent life in our community? Does that seem funny? Why? Is it because deep in our hearts we thrill to the power and spectacle of massed disciplined uniforms and powerful armaments? That we really do not see street cleaners or nurses as heroes of our society, or children as our hope and happiness?

Yet, some men do love to be soldiers. All cultures are full of the mythology of the bravery and beauty of dying (and killing) in war. History and literature extol the purity of military life and the comradeship of soldiers. Military life has its appeal for many men and it is more than just testosterone. In our globalized world young men face a bleak future, the unemployed marginalized men of both the minority and majority world lack purpose and place in most societies. The military offers them status, a uniform, a gun and action. Remember our horror when we learned that East Timorese youth joined Indonesian militia and harassed and killed their own people. After years of living in poverty in a militarized society the perks of the job must have been irresistible.

The Insecurity Of The Commons

In a world where the rich are getting richer and the poor are getting poorer and more numerous the reason for this chasm of inequality can be found in the exploding theft of our commons. There are few geographic frontiers left for imperialist powers since the break up of the Soviet Union. Most of the world is firmly in the grip of corporate globalization.

Biotechnology has invaded and is conquering the natural world, from the genes of our bodies to the secrets of plant life. A devil's breakfast of global trade deals and institutions—WTO, TRIPS, NAFTA, FTAA, WB and IMF etc.—serve up the world and its resources to the powerful alliances of state and commerce based in the minority world, primarily the USA, and control our lives. Those that resist these forces know that globalization is backed by the threat of military conquest – the use of the world's most powerful military allied with arms manufacturers – the only industry specifically protected under trade agreements.

Many of us thought there was nothing left to conquer, but we were wrong. Under the General Agreement on Trade in Services (GATS) we lose our commons; the fabric of our diverse societies— water, land, resources and our institutions of caring and community—is vanishing. Education and knowledge are being privatized and commodified for profit; information about our bodies and bank accounts is used without our consent.

All societies have developed experience and wisdom for the common good. From caring for

the land to caring for the sick, we have found ways to serve ourselves and our communities. This wisdom is discounted if it can't be used for profit or privatized so it can be. We are in danger of destroying the concept and practice of sharing for the public good. Under the GATS regime non-government service organizations and government services at all levels, from health to public utilities to museums, will be forced to privatize—sell out to profit making corporations.

In British Columbia, everything from the administration of public electricity to ferry services to maintenance of health institutions to the sale of alcohol is being privatized by a corporate-controlled government showing the way to destruction of the commons even before GATS is finalized.

This shatters the concept of public service. Where workers are unionized, unions are under attack. Workers in privatized facilities either lose their jobs permanently or must accept poorer wages and working conditions. Many jobs in Canada have been moved to India, where cyber technology makes it possible for the job to be done for a fraction of the cost here.

Our shops sell goods made in Asian and Latin American sweatshops where women and girls work in appalling hardship to support their families dispossessed by global agriculture agreements and loss of land to corporate agriculture. Other women are forced into the global sex trade and unprotected foreign domestic labour. For unemployed young men with wounded pride and anger, crime and violence in their own families and communities are preparation for military careers. Women are not liberated by the almost slave labour of globalized production, but they are used up and discarded when they outwear their usefulness. Their value to their own societies is diminished. When women move out of communities there is a breakdown in the commons of community cooperation, societies become unstable as traditional values, and their wisdom is no longer respected. Women and migrant workers, generally, are mistreated abroad, but few governments are willing to protect their migrant workers because they send back large sums of vital foreign currency home. They are often the main source of external income for many countries.

Globalization makes a military life appear attractive to men who think they have no other future. At the same time, injustice, scarcity and privatization are presented as ethnic and religious differences. Patriotism creates paranoia. People who no longer have a place in a stable community and who drift to seek work or opportunity are easy prey for diversionary war propaganda. Globalization,

the greed of corporations and complicit politicians, is not blamed for destruction of social and natural environments; particularly not by corporate media who fan the flames of civil strife and never present alternatives to the seeming inevitability of globalization and militarism - nor give reports of peacemaking within areas of conflict. War, like spanking, is even presented as kindness.

“Disconnection Is Critical For A System Based On Profit”

In *Wild Politics* Susan Hawthorne explains that disconnection is vital for the success of globalization and accompanying use of force. Children have books where they must draw lines between dots to reveal the picture hidden in the disconnection. It is time we connect the dots and understand the global powers that influence our most private thoughts and affect our daily lives. In Canada, like India, are citizens who live, sleep and die on the streets. More than one billion people live on 40 rupees (\$1.25) a day. In the USA every person contributes 120 rupees daily to military spending; in the European Union, every cow gets 80 rupees a day in subsidies.

Without connection, peace and security based on cooperative use of the commons are abstract mysteries with no power to inspire or motivate us. Only the acceptance of universal connectedness will end our alienation and create understanding of consequence.

Saskatchewan is home to a peaceful population of hard working people; it was also a Canadian pioneer in social programs although it is not our richest province. About 25 years ago social democrat politicians there made the decision to allow the mining and export of uranium. (Canada is the world's largest exporter of uranium.) Their rationale was that as agricultural revenue declined the mines would pay for social programs. That uranium fuels nuclear power plants, nuclear weapons, and lies in mounds of so-called depleted uranium used in weapons in Yugoslavia, Afghanistan and Iraq. Twenty nations of the world, including Canada, stock depleted uranium weapons in their arsenals. Depleted uranium spreads deadly radiation that will go on killing until our sun goes dark. How can nice people decide that poisoning another nation's environment is a fair price for their health and social programs? Do they have to see, as I did in Iraq, a hospital full of blind, deformed, tumour filled babies before they understand?

The founder of McDonald's industrial food said: **“We cannot trust people who are non-conformists. We will make conformists out them in a hurry. The organization cannot trust individuals; the**

individual must trust the organization.” There is little difference between that expression and the slogan: **“My country, right or wrong.”** Of the world's 100 largest economies, 50 are corporations. Corporatism is overtaking patriotism, using the same weapons of propaganda and power.

The commons of shared wisdom and the ability to make connections are crushed to ensure the success of globalization and militarization. Government policy is also being privatized. Corporations and right wing think tanks with their vast budgets now virtually dictate policy and formulate trade agreements for compliant governments who manipulate the public. In the film, *THE CORPORATION*, the director of The Fraser Institute which advises the British Columbia and Canadian governments proudly said: **“I will not be happy until every square inch of the planet is privatized.”**

Marcuse's alternatives are being relentlessly destroyed; regional and community interests are being replaced by globalized theft. The commons of communication is lost as most of the world's media, including so-called entertainment, is dominated by corporate greed and deceit. Media has become the most powerful form of social control. History and memory are obliterated by media, governments and education systems. People cannot realize their vision of justice and peace without securing the commons of shared history, communication and wisdom. When vast numbers of people leave their own societies to become refugees, migrant workers, soldiers and economic flotsam on shifting economies, they lose their commons, their culture. Their departure weakens their home communities as war and globalization cause mass human movement across the globe.

Conclusions And Action

We are all educators. If we are committed to our cause of peace, it is a lifetime commitment.

We must restore, create and disseminate our own commons of knowledge and history. We cannot depend on an information system that denies the possibility of peaceful alternatives. **“We can be our own media”** (Rosalie Bertell, at the UN Women's Forum in 1995). We can be our own writers, musicians, publishers, film makers, historians, artists and teachers. Being our own media means to present the basis of peace as more than understanding of a particular conflict, useful as that is.

The global pillage of our commons by globalization and militarism is creating more poverty and injustice daily as a few gain obscene wealth. Wealth is the problem to be addressed, not poverty. Many poor people live a vulnerable life of constant danger,

but the wealthy feel threatened by the majority and very threatened by those of us who present positive alternatives to economic and military violence. It is the rich who are truly vulnerable; they live in heavily guarded enclaves, hoping money, armies and weapons can save them.

Peace education embraces the necessity of regaining, enhancing and developing democracy and human dignity as the basis of peaceful world. To have a world of peace we must develop a cooperative self-sufficiency as security against global violence and over consumption. Wealth is dignity and freedom from want and fear – not the accumulation of money and goods. National wealth can be transformed into a secure commons, including fair taxes and an end to the spiral of military spending.

Most countries signed the Universal Declaration of Human Rights in 1948 and swore to uphold and enforce them, yet rarely enforce publicly committed moral obligations to treat one other as equal; that includes women, those of other religions or background, the disabled and children. Our governments say they must comply with trade agreements so they change our laws and living conditions, nearly always to the detriment of the common good; but disrespect, violence and abuse of other people are still tolerated and incorporated in law. Yet there has been some progress.

Dr. Rosalie Bertell says in *Planet Earth: The Latest Weapon of War* that a fundamental change in core values is possible and has many precedents. Many societies have changed their values about women, children, animals, and people of different sexual preference. The changed values are recognized and some are legislated as public attitudes have changed, even if they are not always adhered to. The Declaration of Human Rights is the basis for a peaceful world.

Conflict this decade is based on the lust for oil or the lust for minerals and plant resources and water: from Colombia to Myanmar, Iraq to Uzbekistan, and East Timor to Nigeria. Peace workers connect the issues and peace action includes reclaiming the world's resources for shared sustainable use.

We can be optimistic about the new awareness of today's activism. We are finally connecting the dots of greedy corporations, rampant arms trade, consumerism posing as happiness, the glorification of violence, trade deals and conflicts where the most vulnerable—the unarmed—are killed, raped, injured, and displaced.

Fair trade has become popular and widespread. There are successful campaigns against sweatshop labour; ethical investment is growing in the minority world as ethical shopping and voluntary simplicity

gain acceptance. We are organizing successful boycotts against corporations who profit from and fund war, destroy the environment and abuse their workers and deny them basic human rights. The growing reaction against the WTO and other trade agreements, started by social movements, is being adopted by some governments.

The USA-UK war on Iraq was not stopped by the millions who organized against it. Success will require more than 5 million people demonstrating on one day; we will have to organize 500 million, a critical mass. The peace movement matured in this struggle. It made the links between militarism and the global theft of resources. We saw the commons being invaded and grabbed. We learned that peace, justice, cooperation, democracy and sustainability are inseparable.

Everywhere the dominant paradigm of violence and greed is being challenged by a new paradigm based on cooperation and compassion. Hopeful links are forged between political and social movements, particularly in Brazil, Venezuela and Bolivia. As our movement matures, we develop new political actions that are not based on elitism or hierarchy, which cannot be corrupted or co-opted. We build our visions as we oppose the corrupt systems in power; we shall construct as we deconstruct these unjust, unsustainable structures. This is the greatest challenge facing our movement today—to take power and use it wisely—and one we all need to take home and discuss. Our future as educators and activists is in the work of transforming our visions into action.

This new global resistance in all its diversity—from the forests of British Columbia to the streets of Washington and London, the river valleys of India to the farmland of the world—is all wonderfully connected. Our resistance, based on a vision of peace, justice, sharing and love will overcome greed, violence and deceit. Diverse, grassroots, non-hierarchical- and connected- movements are the model for the peaceful future we are determined to build. Creative resistance gives our lives meaning and develops the compassionate will to work; it gives the lie to the imperative of selfish consumption, gives truth to our deepest longing, it gives us companions in the struggle who never cease to inspire and help us.

A culture of peace is a culture of economic and social justice and respect for all life.

Knowing is not enough; act for peace and justice.

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A longer version of this paper, originally presented in
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War as an Institution

by Paul Hamel

Given at the "War as an Institution" Forum with Dr. Pervez Hoodbhoy at Innis Town Hall, Friday July 16, 2004. Co-sponsored by Family of the Heart. This forum included the Canadian premier of Dr. Hoodbhoy's new film "Crossing the Lines: Kashmir, Pakistan and India"

Greetings,

I have only a few minutes to mention a few issues, the theme for this evening being "War as an Institution." For the next few moments, I wish to focus on this theme in the context of the Canadian situation. Here I would like to develop the notion that promotion and execution of violence or war is, in fact, embedded (to use a popular media term) in the very structure of our society. This structure has the quality of negating democracy in the country. Furthermore, this structure is designed so that promotion of war and waging of war around the world provides direct benefit to every single person in this country.

The conduct of modern warfare is clearly a technological issue which is appropriate tonight as we have this forum on the campus of the University of Toronto. It is here in the classrooms of the departments of physics, chemistry, engineering etc. that the "Minds that Matter" in this country are trained so that they can contribute in research, development and manufacturing activities in business corporations such as General Dynamics Canada, Lockheed Canada, CAE Electronics, Bombardier, and General Motors. These entities are the top of a very large

list of military contractors which develop and supply the vast array of weapons and weapons components to the Canadian military establishment and, in a massive way, to the US military.

Indeed, as many of you know, Canada is listed as 46th largest military contractor for the US through these entities. These contracts are all channelled through a Federal agency, which you and I support, called the Canadian Commercial Corporation. This agency has as its mandate the task of streamlining access to foreign contracts. Sixty per cent of those contracts happen to be military contracts. If you go to the CCC web site you will see a rather significant icon which shows one how to benefit from the military expertise in this agency. Thus, the Canadian Government, which is supposedly "us" in a democratic society, actively promotes these war industries around the world. In addition, the high risk research and development side of some of these war industries are further financed through a Canadian Federal program called Technology Partnerships Canada, which had the previous name of the Defence Industry Productivity Program. This latter program has, among its features, the interesting quality of having the Canadian population take the risk for research and development activities while directing the profits to the private corporations, a phenomenon known as "Socialism for the Rich."

However, the creation of these Federal programs has another important purpose in that it negates the democratic system which some believe exists in this

country. Take the case of the latest invasion of Iraq, for example. The semi-honourable former Prime Minister Jean Chretien stated that Canada would not join the coalition of the willing; that we would not stand bravely shoulder-to-shoulder with such military giants as Nicaragua, El Salvador, Tonga, Palau, Micronesia and Mongolia. However, as many of you know, Canadian military personnel were in fact with US forces in Iraq, were involved in the planning of the war at McDill Air Force Base in Florida, provided military transport planes for use by the US, coordinated air battles in aircraft known as AWACS, and had three Canadian war ships in the gulf region as part of a battle fleet that was launching attacks against the people of Iraq. However, through our wonderful Federal agencies, we played a much larger role in that Canadian enterprises were the largest foreign suppliers of military equipment to the US for its war against the Iraqi people, a detail that the US Ambassador to Canada, Paul Cellucci had to point out since the press in this country couldn't seem to find the time or space to report the information before Mr. Cellucci brought it up.

So, the official illusion exists that we were somehow uninvolved in this illegal assault when in fact we played a fundamental role in its planning and execution. This has the effect of negating any democracy that might exist in this country. Specifically, despite the objection of the majority of people in this country to the illegal war on Iraq, we have structured our society such that any democratic decision to act peacefully is completely overridden through public and private institutions which we continue to

fund and support and that make massive profits in the preparation and waging of war.

It is not surprising that this situation exists since the Canadian population also benefits directly from any of the activities used to plan and wage war. Specifically, as pointed out recently by Richard Sanders of the Coalition to Oppose the Arms Trade, the Canadian population has a significant stake in the success of and profits generated by the military-academic-industrial complex. Here, I refer specifically to the Canadian Pension Plan, which is the principal old age pension for most Canadians. This huge fund has 683 million dollars invested in 120 foreign military industries—88 per cent of those in the US including Raytheon, Lockheed (the largest military contractor in the world), Boeing, and General Dynamics. When one also considers military investments in Canadian military corporations, this amounts to 2.5 billion dollars in these war-making companies. Indeed, of the top 20 military contractors in the world, Pension Plan invests in 15 of them.

Thus, every time there is a war, we have structured this country so that we all benefit. Regardless of whether the Canadian population articulates its opposition to war and in spite of the illusion that we are somehow a peace-keeping nation, we have a long term stake in the profitable business of war. Indeed, we live with the fundamental contradiction that we have constructed a system in which “security” in our old age depends on us waging more and more wars on a planet packed with weapons sufficient to annihilate all of us at any time.



Crossing the Lines: Kashmir, Pakistan and India

a documentary by Dr. Pervez Hoodbhoy and Zia Mian

After four wars, Kashmiris and their land are divided between Pakistan and India, the source of recurring crises. The next war may well be a nuclear war. In this tragedy, each side tells the story of the injustice and violence of the other, and feels only the suffering of their own. This path-breaking independent documentary film, made in Pakistan, challenges us to look at Kashmir with new eyes and to hope for a new way forward.

The film uses interviews of key figures and ordinary people from every side, rare archival footage and computer animations to chronicle the wars, the failed efforts at peace and the daily toll this failure exacts on those caught in this tragic struggle. We hear leading Kashmiri militants voice the frustration of their hopes for democracy and their desperate rebellion against oppressive Indian rule. We see

how Pakistan's relentless determination to confront India created an Islamic holy war that brought terror and death to Kashmir. Radical Hindu leaders in India and Islamic militants in Pakistan, explain their shared conviction that Kashmir is part of a greater struggle that knows no limits. We discover how amid rising religious passions, governments in India and Pakistan seek to build national identity through cultivating prejudice and hatred towards the other.

Rejecting the national ambitions of Kashmiris, Pakistanis and Indians alike, the film offers a vision of a shared future for all of South Asia built on a common humanity.

Copies of the documentary can be purchased from the Eqbal Ahmad Foundation.



excerpt from
Understanding 9-11 and the 9-11 Wars
by John McMurtry

"The system works"

- U.S. Secretary of Defense Donald Rumsfeld

Decoding the Compulsion to Disconnect

In May 2004, leading Americans and the international community were indignant at the tortures of Iraqi prisoners by U.S. occupying forces when undeniable pictures were published. Yet no-one of record in the media or anyone else in a position of public trust scrupled to observe what had started it all—the lawless U.S. invasion of Iraq in March 2003, “the supreme crime” under international law, the crime which the judges at Nuremberg described as “only differing from other war crimes in that it contains within itself the accumulated evil of the whole.”² The torture was, as the judges at Nuremberg had foreseen, a predictable consequence of “the supreme crime.” Yet all in official culture remained disconnected from the cause.

It was reassuring to life consciousness that the international media finally broadcast crimes against humanity instead of ignoring them. But manichean slogans of “the Free World” versus “the Terrorists” remained delinked from the criminality of the occupation itself. That the U.S. focus of concern was “damage to America’s image” indicated the nature of the problem. Although the Red Cross had reported that 70 to 90 per cent of the torture victims were ordinary citizens picked up at random, this did not diminish cries for redirecting attention back to “the real danger, the terrorists endangering America.” That the official Taguba Report itself was not permitted to question anyone above a part-time reserve-army woman officer (who was kept out of the interrogation room by U.S. Defense Intelligence), was nowhere reported as evidence of top-down control.³ That the far worse crimes of maiming and killing defenseless Iraqi women and children by bombs were delinked from the torture regime inside the prisons indicated that the murderous blind eye was still closed.

In fact, documented reports of criminal abuse of prisoners by U.S. forces had been coming in to high command since the invasion of Afghanistan in 2001 with no decision to stop the routines.⁴ “Stress positions,” “humiliation,” “use of [attack] dogs,” “sleep deprivation,” “subjection to noise,” “prolonged isolation,” “food and water deprivation,” “restriction of toilet facilities,” and “diet denial” were the generic orders.⁵ Yet ever since November 13, 2001 (shortly after 9-11), Presidential decree had unilaterally

overridden the U.S.-signed Geneva Convention of 1949 on the Treatment of Prisoners for the first time in its history. Anyone who objected was deemed to be “lending support to terrorists.” The TV public itself daily watched prisoners—never charged or tried under any due process of law—hooded, shackled and limb-trussed, there were no visible asked questions about the brutality of the abuse, nor about the colonial occupation of the Cuban territory to perpetrate the crimes. What was central was “the torture scandal” and opinions on how to manage perception of it. Accordingly, “communist Cuba” was subjected to new and crippling sanctions for its “human rights abuses” as the state of siege by illegal U.S. embargo and destabilizations was stepped up. The Orwellian set-points of meaning did not arouse media or expert questions.

What could explain the systematic disconnect from reality with no consciousness of it? It was not confined to the U.S. right or even the U.S. itself. As the torture regime was exposed, the omnipresent liberal intellectual, Michael Ignatieff, urged fellow Canadians on public television to build up their military to join the U.S. in enforcing “human rights” across the globe.⁶ The disclosure of the videotaped Iraq tortures after years of lawless prescription was itself revealing of the selective mind-set at work. In fact, the story of U.S. torture on 60 Minutes in late April 2004 was a broadcast that had been held back for weeks because its pictures of torture by Americans were “not very patriotic” to show.⁷ Only when “CBS heard that Seymour Hersh, working for the New Yorker” was planning to publish fresh photographs—and a damning report [by the army itself]—did the network decide to go ahead.⁸ Until the reports came out elsewhere first, the facts could not be seen. In consensual closing of the doors of perception, the documented evidence was blocked out as non-existent.

Throughout, U.S. concern remained narcissistic. “America is suffering a blow to its international image,” the elite and the many regretted with indifference to the fate of the victims about whom there was no further interest. The fatal pattern was overlooked that tells all—that the U.S. security state repudiates any law if it protects the lives of people outside itself. Since “America’s defence of its interests and investments” abroad entails the right to reject whatever is deemed inconsistent, it follows that its right is to act above the law. In the words of the U.S. September 2002 National Security Strategy document:

“We will take the actions necessary to ensure that our efforts to meet our global security commitments are not impaired by the potential for investigations, inquiry, or prosecution by the International Criminal Court (ICC), whose jurisdiction does not extend to Americans and which we do not accept.”⁹

Not only immunity from international criminal law was thus assumed. Unilateral American repudiations of the Convention for the Prevention of the Crime of Genocide, the Kyoto Protocol, the Rights of Children, the Landmines Treaty, the Convention Against Racial Discrimination, the Comprehensive [Nuclear Bomb] Test Ban Treaty, the monitoring and testing requirements of the Chemical and Biological Weapons Treaties, the Covenant for Economic, Political and Cultural Rights of Nations, and the proposed Treaty on the Limitation of the Military Use of Outer Space all continued with no joining of the dots by expert commentary. What repels the pattern from view? Something deeper than class and faction is at work. A regime of meaning operates across classes and scientific disciplines themselves to disconnect the elements so that the whole cannot be seen. To be above the law—including laws applied by the U.S. to prosecute others—was assumed by all as “America’s leadership of the Free World.” Silently, the impunity that once only God-Kings pretended was internalized by other states and the UN itself as the regulating freedom of globalization.¹⁰

Exposure of the U.S. torture regime in Afghanistan and Iraq left the impunity intact. The pictures made plausible denial impossible, but the criminal occupation of Iraq continued with renewed UN support on June 8, 2004. Only disconnected pieces were perceived. The “War on Terrorism vindicated all. That the same justification was used decades earlier by the Third Reich was not observed, least of all by those invoking “appeasement of Hitler” as a justification to invade poor non-industrialized countries.¹¹ The comparison was unthinkable through America’s lenses of self-conception which assumed itself as “the society of human rights.”

Behind one corporation-friendly state was the precipitating Reichstag Fire of February 27, 1933 to declare war on all who stood in the way. Behind the successor war state was the destruction of the World Trade Center on 9-11 to allow the same in different degree. Both industrial super states were supported by familiar transnational corporations working both sides.¹² Both claimed “terrorism” by shadowy others as the ground of “self-defence” by emergency legislation and wars of invasion. But unlike the Reichstag Fire, 9-11 was advised as desirable before the event - by the Bush regime’s own Project For A New American Century . To be exact, PNAC planned a

“process of transformation” to achieve “full spectrum U.S. dominance” across the world which was made contingent on “some catastrophic and catalysing event—like a new Pearl Harbour” if the process was not to be a “long one.”¹³

The wish of the men positioned to enable its fulfilment was duly granted within a year of Bush Jr’s inauguration, on September 11, 2001. Well known former allies monitored around the clock fulfilled their long known declaration of intention to attack the World Trade Center.¹⁴ One former U.S.-financed agent, Omar Abdel Rahman, was specially experienced at the job, having masterminded the first attack on the WTC in 1993 before warning at his trial of another to come¹⁵. Another formerly assisted agent in Afghanistan, Osama bin Laden, who was U.S. armed and supported to attack the Soviet-supported government of Afghanistan, was better known for the plan. When 9-11 happened, CIA Director, George Tenet, immediately attributed the attack to him, and named the U.S. flight-trained Zacarias Moussaoui.¹⁶ Still, any foreknowledge was ruled out as “conspiracy theory,” and so the ruling mind-set stayed closed as “realistic” and “patriotic.”

The facts of 9-11 which are disconnected from are now copiously documented.¹⁷ But why and how these facts are ruled out by the masses and elites at the same time is not explained. The argument has been at the first-order level of the facts, not the law-like operations on the facts by the collective thought-system that selects, ignores and reconnects them in new form—what I call the “regulating group-mind” (RGM).¹⁸ Only when we understand this meta-level of constructing the facts and their meaning in accordance with their conformity to and expression of a pre-existing structure of understanding can we know what is going on or, more specifically, can we find our way out of the anomalies and disconnects of our era.

The Regulating Group-Mind: A Paradigm Example

Understanding of the RGM in the first instance proceeds by three basic principles of explanation:

- (1) there is a “regulating group-mind” or socially regulating syntax of thought and judgement which
- (2) blocks out all evidence against its assumptions; and
- (3) blinkers out the destructive effects which reveal its delusions.

Response to 9-11 and the 9-11 Wars are my central paradigm example of the operations of the RGM

across classes and borders. Yet the RGM operates on every level, and explains also the paralysis of nations in responding effectively to planetary ecosystem collapse. The RGM may lie behind every systematic social pathology of our era. In each case, it blocks out facts and connections of life-and-death significance, and in each instance, its exclusion is a variation on one life-blind thought regime, the “shadow subject” of our era.

Received understanding of 9-11 is a turning-point instance of the operations of the ruling group-mind, but is selected for forefront attention because of its taboo hold against so much uncontested evidence and reason. Primary connections which are preempted on the most general plane are: (1) the policy declaration in 2000 by PNAC of U.S. national security planners which expressed the commitment to “full-spectrum dominance” by the U.S. state across the world; (2) its expressed desire for a fast-track to this dominance rather than “a prolonged one”; and (3) the perfect consistency between this policy, what happened on 9-11, and what happened afterwards through the 9-11 Wars on Afghanistan and Iraq.

An acute example of blocking out the defining elements of this evident continuity of fact and meaning is that all U.S. air defences at the most central level were coincidentally down on September 11, 2001 in precise accord with (1), (2) and (3). This connection is as important and demonstrable as any could be for history, but it is nevertheless consistently excluded from the contents of consciousness in all public commentary, and Left discourse itself—the tip of the deeper disorder of the RGM that we do not yet suspect.¹⁹ In fact, there was no attempt to achieve any U.S. air-defense intervention with the rogue 9-11 planes until after two jumbo jets had hit different buildings of the World Trade Center in leisurely succession and a third plane or missile had hit a just-vacated wing of the Pentagon—all of this long after the four known and separately hijacked planes had rerouted and flown around unimpeded within the most heavily defended airspace in the world for well over an hour altogether with none disturbed by any sign of defense reaction until after all three buildings had been hit.²⁰

That the U.S. war state which then went into motion showed signs of long planning in each case was not perceived as significant,²¹ nor was connection to the past statements proclaiming the purpose these plans sought to fulfil. All conformed to the taboo against joined meaning. There were many levels of the disconnect. Singly and together, they ruled out of view the evident through-line of events from the policy record prior to 9-11, to 9-11 itself, and then to “America at War” continuously since enactment

of the original policy plan. Disconnect also ruled on the question of “terrorism” itself. Even as young Americans were killed in rising numbers in Iraq, while non-American families were terrorized across entire countries by the U.S. invasions in violation of the most solemn law of nations, “terrorism” was perceived in all received discussion as solely the Other’s affliction on the Free World and its allies. That in fact, on the contrary, virtually all the terrorization proceeded from the war-crimes, carpet bombings of societies, and systematic torturing of the legally innocent by the U.S. in its “war against terror” was elided from consciousness. The legal definition of terrorism itself was excluded from expert discussion of it.²² That “the central issue facing America and the world” was in these ways reversed in its meaning across cultures and classes was inexplicable when the majority had no interest in reproducing the inverted story as their own meaning. No received theory can explain such a phenomenon, yet there was an explanation. All the facts and connections were unthinkable within the *a priori* set-points of the reigning thought-system.

The connections across plan and fulfilment, cause and effect are not seen by the RGM to the extent that they conflict with its deciding assumptions. When one recognises that each and all are consistent in expression of one regulating syntax of meaning, anomalies of 9-11 or ecological blindness are no longer anomalous. Since this “way of life” is presupposed by all its creatures as their own framework of cognition,²³ the problem is always with what does not conform to it, which is therefore perceived as subversive, irrational or the enemy. Variations on the terminology of abuse of those whose thought does not conform is the media commentator’s principal poetic license and flair. Since the ruling group-mind always operates *a priori*, facts cannot dislodge what its categorial structure perceives and knows already. Thus no-one in the international media noticed 33 months later in the most dramatic exposure of U.S. defense intelligence cover-up and criminality in a generation—the “Iraq torture scandal”—that the clear connections between the master strategy minted before 9-11 and everything that had occurred since held intact with no movement to modification even after the exposures of the most brutal moral and political crimes.

The lead idea of a “catastrophic and catalyzing event” to expedite desired geostrategic control over vast regions of formerly public-owned oilfields which were no longer within or protected by the Soviet Union was simply not discussed. No-one appeared to notice how amidst all the disasters of the Iraq occupation that the master strategy had strik-

ingly achieved all of its declared pre-9-11 objectives. The through-line of meaning—seizure, control and restructuring of the routes and sources of the vast and publicly owned oil resources of Central Asia (“the Afghanistan War”) and the Middle East (“the Iraq War”)—remained unseeable as the reason for 9-11. The RGM perceived, instead, “another historic step forward for freedom” and “a better world without Saddam’s brutal regime.” Diversion of thought to the designated enemy of the group is certainly an RGM operation of the greatest importance, perpetually disconnecting consciousness from unthinkable objects of attention. It precedes any conspiratorial concealment or ruling class manipulation because it

is a preempting block by a collective regime of understanding. Since it vindicates the knowing group and its members in a manner on which all can agree whatever facts contradict their perceptions of self and other, its perception remains secure and consensual.

Endnotes.

The detailed Endnotes for this article are posted on the Science for Peace Web site.

The full article (50 pages) in two downloadable formats is available on the Science for Peace web site.



Electrical Energy Consumption: The Human Side of the Problem

A Brief to the Parliamentary Committee, Queen’s Park, 24 August 2004

by Derek Paul

From the old path to the new

All forms of unceasing growth in consumption are unsustainable in the long run. Fig.1, based upon Ontario’s consumption of electrical energy shows two epochs that would be unsustainable if the increases were allowed to continue. Below the actual data in the graph, there are two lines representing 0.9 percent increases per annum to indicate likely population growth. Even these are unsustainable in the long term.

In Fig. 1, the four percent per annum increase in consumption during the 1980s was bound to come to an end and, very fortunately for us, it changed very significantly. Nevertheless, the roughly 1.6 percent increase since 1993 is also unsustainable, on a longer timescale.

The principal theme of this brief is that about half of Ontario’s current annual increase is due to human factors, and that the technology already exists to permit a steep downward trend toward the MacNeill-Runnalls line (fig.1). Furthermore, several factors in Ontario’s energy future will allow us to drop below the MacNeill-Runnalls line and continue downward toward the 50 percent line (fig.1). In the more distant future, as solar energy becomes increasingly economic, and households and businesses will depend less and less on the grid,

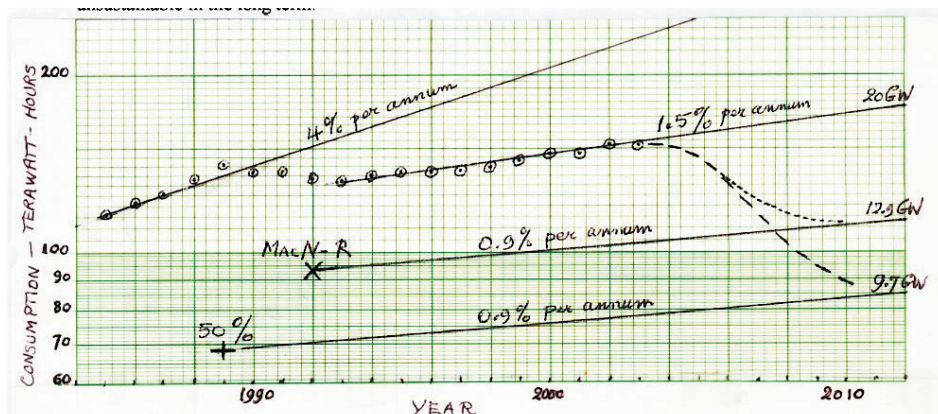


Figure 1. Logarithm of Ontario’s electrical consumption in terawatt-hours from 1985 to 2003. The upper two straight lines indicate constant annual percentage increases extrapolated from the data. The point X, indicated as MacN-R, represents the level of consumption that the 1993 MacNeill-Runnalls Report showed could be achieved through economization in consumption. The MacN-R level has been extended as a straight line to indicate consumption rising at the rate of rise of population. The lower point, +, indicates 50 percent of the 1989 consumption, in keeping with typical consumption in the more industrially developed European nations, which is at or below 50 percent of per capita Ontario consumption. The line extrapolating that result to 2012 is also based upon a 0.9 percent annual population increase. The dashed and dotted lines are suggested scenarios for Ontario’s future that should result from actions and recommendations of the present Parliamentary Committee.

we may expect that consumption, as measured by what the grid supplies, will continue on downward. Thus a point should be reachable by 2012, which is below the MacNeill-Runnalls extrapolation to 2012, and this corresponds to an average consumption of under 13 GW (average), below the 1985 level. I believe we could go much further than this. The 50 percent extrapolation to 2012 in fig.1 corresponds to only 9.7 GW (average), which could be supplied entirely from renewable energy.

This brief takes as its first assumption that Ontarians don’t want to have their standard of living

reduced. Secondly, the drop from current levels to the MacNeill-Runnalls line cannot take place under laissez-faire.

Lastly, I posit that it is the prime job of this Parliamentary Committee to set in motion all those processes that will enable Ontarians to reduce their consumption painlessly from the present levels to the MacNeill-Runnalls line and below. Since most, if not all the technologies exist to achieve this, the problem is largely a human one, not predominantly technical.

Recommendation 1

The most important task of the present Parliamentary Committee is to set in place structures within the Ontario Government that will focus on the human side of electrical economy, so as to ensure a rapid reduction of the baseload over the next fifteen years.

How to begin implementing Recommendation 1.

With one main exception, no government in Canada in the past 51 years has dared or even wanted to interfere in the matter of human habits. Such interference would have been regarded as undemocratic at best and offensive at worst. The major exception has been the federal campaign to reduce smoking and the dangers of smoking to non-smokers. Most people agree that the anti-smoking campaign has been successful, even though there are still many smokers around.

Wastage of energy is a very different matter from endangering health through smoking, but both problems have some common factors that enable us to learn from the success of the anti-smoking campaign. Because electrical energy consumption of Ontario is so very high compared with that of any European country enjoying a standard of living comparable to ours, we should surely be attending to the matter of wastage before considering expanding supply. Benign interference is thus fully justifiable today. Moreover, it is highly necessary. An increase of Ontario's baseload should not be tolerated for even one more year.

Recommendation 2

That the Ontario Government should take steps forthwith that will have the effect of holding Ontario's level of consumption at or below its present level, even if this should require several novel measures in combination.

Recommendation 3

That the Government of Ontario should publicly announce its intention to bring in changes that will have the effect of reducing

electrical consumption greatly over a period of time, and that it intends to have it remain indefinitely at a much lower level than at present, without sacrificing the standard of living in Ontario.

Interconnections

Today all the world's major problems are interrelated. Electrical generation and consumption of electrical power are directly or indirectly related to population, climate change, the design of neighbourhoods where people dwell in small or large numbers, building design, plaza design, transportation in all its forms, and a host of other factors. In all of these, human habits and attitudes play a role. Nevertheless, the problems of electrical supply and demand have hitherto been treated as largely technological, so that the human-habit factor has tended to be overlooked or taken as a given, something that is unalterable — we cannot, must not, or dare not attempt to change it.

The habits of thought and action of the last fifty years in North America are, however, no longer appropriate to the coming age, and this will be the main focus of this brief.

The ramifications of power generation are so broad that I submit a further recommendation, based upon the interrelationship of energy and climate-change concerns within this Province. Since electrical generation is a major factor in energy matters, the recommendation is appropriate here.

Recommendation 4

That the Government of Ontario set up a Supervisory Committee (or a Superministry) — if such does not already exist — to oversee the related questions pertaining to energy consumption, electrical generation, town planning, building, transportation, forestry and reforestation, and, above all, the human factors pertaining to change as we advance through the 21st century.

First steps to reducing the baseload

Changing human bad habits is one of the most difficult of tasks and requires persuasion, education, information and, ultimately, the proffering of benefits — taking this route will require a great deal of forethought, to be followed by a certain amount of effort, but it will be worthwhile. Success will have been achieved when there has developed a consciousness on the part of most citizens that they are part of the problem and also part of the solution, that individual behaviour does matter because of collectivity. Even though society can tolerate one

highly wasteful individual, it cannot tolerate the concept that each person thinks himself/herself that privileged one! What is needed therefore is a series of measures that are not offensive but will have the effect of inducing change of attitudes in a population that was brought up to a way of life in which wastefulness was the norm and was not thought about. It hasn't even been recognized as wastage by most people.

To achieve the new consciousness and decide on specific measures to reduce wastage, full participation of Ontario's population is desirable in a democratic exercise.

Recommendation 5

That the Ontario Government set up a round table to consider measures that would have the effect of reducing Ontario's electrical consumption.

Matter for the agenda of the round table is discussed in the section "Some suggestions for the round table" and immediately below under "Pricing electricity." Pricing is so important that it deserves separate attention here. It happens that the Minister of Energy, the Hon. Dwight Duncan, has already let it be known that his pricing policy is likely to be compatible with what is being put forward here. But it may nevertheless be necessary for Ontario to go further in its pricing policies than is currently planned.

Pricing Electricity

Pricing policy needs to fulfil all the following criteria:

- Discouragement of wastage;
- No electrical power subsidy, direct or indirect;
- Servicing of stranded debt to be incorporated into the price of generation.

While discussion of these points fits within the agenda of the recommended round table, some action is probably appropriate before any round-table conclusions would be forthcoming. Indeed, Mr Duncan's recent statements (*The Toronto Star*, Thursday 19 August 2004) suggest that his intentions are to price electricity much as is independently suggested here.

The continuation of any subsidy violates NAFTA, and can cause resentment of Ontario taxpayers when electrical power is exported. Ontario taxpayers do not want to subsidize exported electrical power. The above pricing agenda will be necessary to attract green energy into the grid, and does not exclude possible policies for inducement to economize. Lastly, an electrical generation price high enough to induce users to economize need not be punitive, as

financial rewards could be offered simultaneously to those who economize. A high enough unit energy price for electrical power allows the creation of powerful incentives to economize. Consider, for example, a scheme in which the first 25 percent of the previous year's electrical consumption is offered to consumers free. This allows consumers in principle to reduce their actual electrical power costs to arbitrarily low levels, a huge incentive to economize. Once consumption is reduced sufficiently, the higher price per kWhr ceases to be crucial. By then, also, a reduction in the Province's electrical load will have been achieved.

Replacing electrical generation from coal

Doubtless many of the presentations to this Committee have been centred on this one question. Some of the presentations will have stated the necessity to construct new nuclear reactors. Others will have emphasized natural gas cogeneration. Others small hydro. Others will have pointed to the huge strides made in Europe and in California with wind power. Yes, we should look much more closely at what is going on in Europe. Europeans have a standard of living similar to ours, and have been wiser about energy usage than we have.

On all of these subjects I have three warnings for the Committee.

The first is on nuclear power. There are ten objections to nuclear power that either have never been answered at all, or have not been adequately answered by its proponents (Annex). Nevertheless, the Atomic Energy of Canada Ltd (AECL) continues to receive a federal subsidy, usually to the tune of \$100 million or more annually, and Natural Resources Canada (NRCan) favours nuclear power as "the only way to supply the baseload" (private communication). The influence of NRCan can be seen in the support that nuclear energy received from Mr Chretien when he was Prime Minister and from the recent report for Ontario made by Mr John Manley. The present Committee needs to look at the underlying assumptions of NRCan's position, among which laissez-faire, as defined in this Brief, plays a role. However, we have seen here that laissez-faire is no longer an option for Ontario's electrical power future. A question you may well ask is, "why is there an AECL and no more general energy agency, say, an Energy Canada agency?" Many years ago, Canada had its own wind development program of vertical axis turbines at the National Research Council. These had a technical fault that is easily remedied with present knowledge but, whether or not the fault and remedy were identified, the development that would have made the technology useful was not pursued.

The small wind farm using these turbines on the Magdalen Islands was sold to private enterprise, but, when I last enquired a few years ago, the turbines were not being used. Today wind power is within the purview of NRCan, which allocates almost none of its great budget to wind, the world's fastest growing form of energy conversion. With an energy agency in this country, the additional research and development would have been done, but when the project came under a Ministry that was predisposed to favour nuclear energy, it is not surprising it died. One of the options that this present Committee might like to consider is an energy agency for Ontario.

It is possible to make almost anything work if you throw enough money at it, but that will not necessarily make it economic. Wind power was already economic at the time I and colleagues wrote our 20 August 1998 brief entitled "An Energy Strategy for Ontario," a submission to the Ontario Government's hearings on Bill 35.

My last comment on nuclear power is that, contrary to popular belief, it does give rise indirectly to considerable greenhouse gas emissions. This is because the capital intensive construction and manufacture of the reactors themselves involve greenhouse gas emissions, and so also does the fuel preparation. The numbers have been worked out for light-water reactors by Professor Phil Smith of the Netherlands, but he tells me this work has not been repeated for CANDU.

My second warning to the Committee is that one should be suspicious of any hydroelectric project that would flood appreciable land areas. Much has been written about dams in recent times. Nearly all the large dams built in my lifetime have had highly negative side effects, the main one being flooding of large areas of valuable land above the dams. In addition there have been other side effects, such as the erosion of the Nile Delta by the Mediterranean Sea following the completion of the Aswan dam. Now, the mud of the delta is not any longer replaced by the annual floods that used to replenish the soil of the Nile valley. Many of the world's older dams, now silted up or cracking, are due for dismantling. It remains to be seen what will be done when these reservoirs are emptied. One general comment is appropriate, however, that roughly the same energy can be extracted from a river using underwater turbines as can be had by building high dams. This entire subject needs careful study by energy specialists, especially in Ontario, since underwater turbines are to be preferred environmentally. Thus the construction of large dams in Quebec and in Manitoba may be serious retrograde steps. These large electrical energy projects would have

been much less environmentally damaging if the underwater turbine technology had been exploited instead.

My last warning is about myths, which have their value and proper place, but can obstruct progress, especially at a time of change like this. I believe that NRCan's view of nuclear energy is mythical, but at the same time it can become reality if one accepts it for a long enough time. That is to say, NRCan establishes that something is necessary (this is the myth-building step), and then uses that to justify the next technological step. That next step results in a new or improved technology, which is the main one presented to the next generation of purchasers, so that they have little option but to buy it. I believe that NRCan's misplaced faith in nuclear as the only major energy option is based upon another myth, that of the unavoidably rising electrical consumption together with a rising baseload. These elements are based upon the idea that nothing will change in the way people use energy supplies, which is an assumption of continuing *laissez faire*. The myth that nuclear energy is absolutely the only way to go follows (though not very perfectly) from these underlying assumptions that are also mythical. I would suggest, by contrast, that the baseload is in principle flexible and that we can make it very much smaller than it is, and that people are capable of learning to use power when it is most plentiful. Very basic questions of this sort are why we need a round table. About the round table we need people of imagination and depth. The 21st century is not going to resemble the 20th.

Some suggestions for the round table

The purpose of the round table will be to educate people and persuade them to economize in their use of electricity. An additional purpose of the round table will be to introduce the concept of flexible usage of electricity, that is, using electrical power predominantly when it is most freely available.

Incentives and disincentives

When it comes to persuasion, this need not be only through the written and spoken word, but will need to be supplemented by incentives to economize and disincentives to continuing wasteful practices. Generally it is likely that a combination of incentives and disincentives (carrots and sticks) will be more effective than either carrots or sticks alone. A recent example comes from motor vehicle purchase, which also involves energy economy. A tax advantage is offered by the federal government to purchasers of hybrid vehicles, which are the most fuel-economic and by far the lowest-polluting choices today. However, little tax disadvantage is offered for the converse, namely, choosing one

of the standard vehicles. The tax advantage, as at present, is an insufficient incentive to purchase the more expensive vehicle, on which the payback time, from fuel economy at current prices, is roughly 5-10 years.

Appliances and other devices for economizing

An obvious purpose of the round table will be to devise strategies for accelerating the replacement of electrical appliances by the most efficient currently available. In this general field, there is much room for incentives and disincentives. Attention needs also to be given to increasing the use of smart plugs and other devices that will enable economies to be made and appliances to be shut off temporarily when the grid is overloaded. Some of these questions are technical, and may have to be left to experts, but consultations with members of the public at the round table can assist in garnering public support for desirable and necessary changes.

Air conditioning, heating and illumination

These are areas where there is tremendous wastage at present. Unfortunately, the ramifications of these factors extend into the building trades and neighbourhood planning, so that, again, some expert knowledge must be injected into these discussions.

Today, air conditioning is used extravagantly in Ontario, often with undesirable effects. The air conditioners, depending on the type of air conditioning, tend to be set at too high power, and to be used when not needed. For buildings where the entire air circulating system is sealed from direct contact with the exterior atmosphere, there is huge wastage arising from conditioning spaces that are not actually in use. Families and businesses alike need to learn how to get the most out of their air-conditioning systems using the least power. These will be matters of education combined with incentive/disincentive measures and technical changes in design. For older buildings in Ontario, where the windows can be opened, as in most houses, even many modern structures, the habits of controlling air temperatures without air conditioning seem to have been largely forgotten, though these were well known fifty years ago. Quite modest amounts of electrically powered air conditioning are sufficient for most Ontario buildings, even in rather hot summer weather. Building trade practices play a major role in determining much of today's wastage through air conditioners. Such practices need strong financial disincentives. See Recommendation 1 for the need for a Committee or Superministry to connect matters such as energy and buildings.

Illumination has been another major source of wastage in Ontario. Years ago, the lighting standards

for public buildings were set by the trade itself, a self-serving arrangement if ever there was one. A separate organization is required to determine lighting standards, with sound new research to back it up. Lighting should serve the needs of users, not merely suppliers of lamps. Illumination today is oversupplied where it is barely needed, and often too feeble where good illumination is required for reading. These factors are very obvious in homes, offices and other public buildings such as hotels. Basic research is also required in matters such as fluorescent lighting, where false claims are made for fluorescent lighting in certain cases on the basis of the amount of light given out per watt of electrical power supplied. The output of lumens per watt is not the only relevant factor. Of equal or even greater importance is where the light is directed. The power used in street lighting could easily be halved in Ontario without rendering the streets any dimmer. Much power from street lighting goes at a slight upward angle to the sky, and is useless for the purposes it was installed and, instead, contributes to light pollution. In addition, street lighting could be further reduced between certain hours. Floodlighting is yet another source of wastage, and causes further light pollution. While floodlighting lends an attractive appearance to some structures at night, the hours for which such lighting is kept on need to be restricted, preferably by free will rather than by fiat. Pricing structures for electrical power could prove an incentive here as in other areas of concern.

Solar substitutes for electrical heating

The use of electrical power should furthermore be discouraged in all cases where a more effective source of power is available. A prime example is hot-water heating. It is fully practical at this time to instal solar hot-water heating in all new houses except perhaps for a few buildings whose relation to the sun's rays would make this impracticable. Nevertheless, a survey two years ago of a new neighbourhood in Richmond Hill, where the builder offered solar hot-water heating as an option, revealed that zero out of 96 new home owners had chosen to install solar heating for their hot water. Strong carrot-and-stick measures are needed to reduce the electrical and/or natural gas consumption in this province for hot-water heating. Even stronger carrot-and-stick methods should apply to heating outdoor swimming pools. Such heating can be done entirely by solar installations, and should become mandatory before long. The sort of measures the round table could recommend would be that solar hot-water heating should henceforth be the norm, instead of the exception, with new buildings, public

or private. Such matters impinge upon the building trade, which is the purview of another Ministry and is again why Recom. 1 was put into this Brief.

Users in the new, 21st century, re-educated Ontario will need and want to know when it is or is not OK to switch on another device, or when it is urgent that they switch one or more off. During my time in this Province, the heavy loads on the electrical system have been accompanied by lower than standard voltages for the consumer. One can tell qualitatively whether the grid system is under great load simply by how the fluorescent lights come on after they are switched on, or whether the toaster takes much longer than usual to burn the breakfast. These symptoms are, however, somewhat too qualitative. The 21st century needs something more quantitative, coupled to the automatic message, "if it has reached this point, turn something off, please." When the 117-volt power reaches down to 90 volts, the message might very well be, "Please turn off as much as you possibly can." Such measures are reasonable when 10 million people are using the same system. We need a method of communication much more precise and visible than we have. One suggestion has been a plainly visible device that tells homeowners and business managers the electrical status quo. In addition, the Ministry needs a system of special messages whereby it can ask for cooperation from the public. In Britain, after the 1973 oil crisis, the government appealed to consumers to economize. Britain's electrical consumption was about half, per capita, of Canada's at that time. The public nevertheless economized 21 percent in its electrical consumption as a result of the appeal. It is possible, therefore, for a large number of democratic people to respond positively in such situations. This is one part of the basis for the Recommendation 4, above.

Electrically independent households/businesses

Already prior to 1998 the "Healthy House" at 150 Spark Hall Avenue, Toronto, was fully independent of the grid, as were other houses elsewhere in Ontario. My own house, constructed in Northumberland County in 1988 is, regrettably, dependent on OPG and Hydro One, whereas a \$23,000 photovoltaic facility, off-grid, had it been installed at the outset, would have paid for itself by next year. The round table will need to consider in detail the merits of

having increasing numbers of houses off-grid, or generating solar electricity from the Sun and feeding their surplus electrical energy into the grid, as does the house next-door to #150 on Spark Hall Avenue. A new set of policies should be developed here, possibly in combination with research into large-scale solar film development.

Media

The round table will need to consider the use of the media in Ontario's public education efforts, and the possible introduction of general courses on energy in schools. The federal government's anti-smoking campaign could be instructive here.

Research

While it is very much the business of the Ministry of Energy to consider the necessity of funding research projects on energy, this is yet another area where the round table might come up with useful ideas.

Social Experimentation

It was mentioned above that the people of Britain responded very positively to a request to economize in their use of energy, including electrical energy, following the oil crisis. In Ontario, there has never been a social experiment of that kind. What would be the result, we might ask, if the Province declared a week of economy, in which everyone was asked to economize as much as they reasonably could in electrical consumption? The result of such an experiment might indicate what was possible without any changes in technology, and without the application of incentives to economize and/or disincentives to waste. Such experimentation is postulated here as a possible way of finding out very roughly what is feasible. It would also raise public consciousness regarding conservation issues, and this might be the most important result.

In conclusion, the ideas presented here are clearly only a partial list of what should be considered, but these matters are at the core of a livable and sustainable energy future for Ontario. The future envisaged here is also one in which the likelihood of blackouts will be minimal and brown-outs can be forestalled.



Justifications and Racism: Hiroshima Day - August 2, 2004

by Paul Hamel

It is encouraging that we continue to gather to remember the atrocity that occurred 59 years ago today. In the next couple of minutes I would like to have us think about the destruction of the thousands of people in Hiroshima and, three days later in Nagasaki as one of many premeditated crimes against humanity which occurred during WWII.

Indeed, I was thinking about Hiroshima in this context since recently I was confronted by an excellent US scientist who, even in 2003, continued to assert the falsehood that the use of the atomic weapons was justified on the grounds that they precipitated the surrender of Japan in WWII and prevented the deaths of up to half a million US soldiers.

This myth of the “lives saved” has been, of course, thoroughly discredited. Documents from the US government, for example, as well as from the diaries of the Chiefs of staff of the US War Department clearly showed that this justification for the use of atomic weapons was not relevant. Rufus Miles in a 1985 analysis published in *International Security*, entitled “The Strange Myth of Half a Million Lives Saved” concludes:

For nearly four decades, the belief that the Hiroshima and Nagasaki bombs averted hundreds of thousands of American deaths—far more than those bombs inflicted on the Japanese—has been a part of accepted history. It was this judgment, more than any other factor, that seemed to give legitimacy to the American use of nuclear weapons. Discovering that this premise was false should help to stimulate a hard rethinking of other premises of U.S. nuclear weapons policies.

The historian Gar Alperovitz in 1995 published a paper entitled “Hiroshima: Historians Reassess” quoting Samuel Walker of the US Nuclear regulatory Commission he states:

Experts continue to disagree on some issues, but critical questions have been answered. The consensus among scholars is that the bomb was not needed to avoid an invasion of Japan and to end the war within a relatively short time. *It is clear that alternatives to the bomb existed and that Truman and his advisers knew it.*

All of these detailed analyses revealed that Japan had collapsed and that they were actively seeking surrender to the US. Furthermore, as was known in

August of 1945, the targets for these bombs were, in fact, undefended, civilian populations.

Alperovitz concludes by saying “To raise questions about Hiroshima is to raise doubts about the moral integrity of the country and its leaders. It is also to raise the most profound questions about the legitimacy of nuclear weapons in general.”

This very issue, of the moral integrity of the leaders, that the victors may in fact be war criminals was discussed recently in the film *Fog of War* where Robert McNamara refers to his discussions with the US General in charge of the bombing campaign in Japan :

If we'd lost the war, we'd all have been prosecuted as war criminals.” And I think he's right. He, and I'd say I, were behaving as war criminals.... But what makes it immoral if you lose and not immoral if you win?

Mr. McNamara, of course leaves the question hanging. But we need to understand that the question is barely relevant. What ought to be the question is why do we not bring our war criminals to justice? When will the war criminals of the west be held accountable for their crimes?

Let me return briefly to Rufus Miles' assertion that Hiroshima should “...stimulate a hard rethinking of other premises of U.S. nuclear weapons policies,” Here I would like to ask another question pertinent to the atomic bomb in Hiroshima. This question was elegantly raised by Michael Ondaatje in his book, *The English Patient*. Was the act of using this atomic weapon, or as he puts it “This tremor of Western wisdom,” against the people of Japan predicated on a fundamental racism inherent in our western society? Indeed, through his Canadian character, Caravaggio he says: “He knows the young soldier is right. They would have never dropped such a bomb on a white nation.”

So to end, I suggest to you that the profound lessons from the crime that was the atomic destruction of Hiroshima are still relevant in 2004. I fear that when we consider the newest generation of nuclear weapons, their unending proliferation and our habit of killing civilians wholesale in undefended places like Iraq and Afghanistan, Albert Einstein's prophetic words that “The release of atom power has changed everything except our way of thinking” sadly remains as true today as they did 59 years ago.



Eliminate Launch on Warning

by Alan Phillips and Steven Starr

Russian and US long-range nuclear weapons are still at "Launch on Warning," which makes a purely accidental war possible at any time. Their basic attitude of confrontation and deterrence, carried over from the Cold War, is dangerous but will not easily be changed. It is essential and urgent to rid the world of the additional danger of an accidental nuclear war between them. While "lowering the alert status" of their nuclear weapons would not be consistent with current deterrence theory, it would be relatively easy and quick to eliminate Launch on Warning without losing the alleged stability of deterrence.

As long as the United States and Russia retain their arsenals of nuclear-armed intercontinental ballistic missiles, some on high alert, the danger remains of a purely accidental nuclear war between the two countries. Neither side wants this: if it should happen, it would be an utter disaster for both countries and for the entire world -- no matter which adversary started it.

One of the most likely causes of an unintended nuclear war is "launch on warning" (LoW)—the policy of launching a retaliatory nuclear strike while the opponent's missiles or warheads are believed to be in flight, but before any detonation from the perceived attack has occurred.¹ Each side has over 2,000 nuclear warheads ready to launch before the incoming rockets have arrived—enough to destroy either USA or Russia many times over. Once launched, they cannot be recalled or neutralized. Launch-on-warning has exposed the world, for at least 30 years, to the danger of a nuclear war caused by nothing but a coincidence of radar, satellite sensor, or computer glitches, and a temporary failure of human alertness to appreciate that the message signalling attack is false.

The disaster of an accidental nuclear war has not happened yet, in spite of a large number of false warnings of which at least a few have had very dangerous features. This is a credit to the care and alertness of the military in both Russia and the U.S. It should not be taken as reassurance. A single launch of nuclear weapons on a false warning would result in nuclear war, and the end of civilization as we know it, just as surely as a nuclear war started by an actual attack. There would be no chance to review the system to make it safer after one failure of that kind.

Although the Cold War is considered over, both Russia and the US have chosen to retain their launch-

on-warning capabilities, and are generally believed to be continuing their launch-on-warning policies. This is inexcusably dangerous.

Due to a lack of funds, Russia has to rely on warnings from only one system for much of the time. The Russian satellite fleet is incomplete and there are periods when segments of the country's periphery are not properly monitored.² Decaying Russian technical systems must increase the likelihood of false warnings, as well as the possibility of over-reaction in a confused situation.

The "threat conference"

When warning systems detect a possible attack, there is at most a total of 20 minutes for human operators and commanders to call and conduct what the United States calls a "threat conference." If the warning were to be assessed as a nuclear attack, top U.S. or Russian military commanders (as the case might be) would contact their president to advise him, and the president would have only a few minutes to decide whether to retaliate, and would be under great pressure to do so.³ The threat conferences require, and so far have achieved, the extraordinary standard of perfect accuracy

The US government has kept information about false warnings secret ("classified") since 1985, and Russia has always kept that information secret, but it is clear that threat conferences have not been rare events. Most of the false warnings have probably been routine and easy to dismiss;⁴ others have been serious enough that launch preparations have been started which would have been visible to Russian satellites.⁵ In January 1995 a Russian false warning resulted from the launch of a rocket from a Norwegian island, for atmospheric research. It is reported that the Russian nuclear weapon forces went on full alert, and President Yeltsin was handed the "nuclear football" activated and ready to order launch. The event was the subject of a report to Congress. There is an article on it by U.S. experts von Hippel, Blair, and Feiveson, in *Scientific American*.⁶

It is very dangerous to allow a small risk of a great disaster to continue for a long time. If the total risk of a wrong conclusion from any one of all the threat conferences in a year had been as little as one per cent, it is easy to calculate that the cumulative risk over 30 years was *a little greater* than the risk of death from one pull of the trigger at Russian roulette.⁷

No-LoW does not need verification

Replacing LoW with a policy of "Retaliatory

Launch Only After Detonation” (RLOAD) by both parties would, at a stroke, remove the danger of an accidental war caused by a false warning.

The proposed change would not require symmetry, nor verification, nor an agreement (much less a treaty); nor would it undermine “deterrence.” “No launch-on-warning” (No-LoW) or RLOAD could be adopted quickly and unilaterally. If one side adopted it, the risk of accidental war would be immediately reduced by approximately one half. When the other side did the same the risk of war caused by a false warning would be zero.

From the point of view of preserving deterrence, verification of no-launch-on-warning is actually undesirable. Either side planning a preemptive attack would want to be absolutely certain that its opponent had changed to and remained under a policy of No-LoW. Without verification a potential attacker could not be certain, but if No-LoW were “verified” he might feel more confident of making a successful “First Strike.”

“De-alerting” is a term commonly used in recommendations that nuclear weapons should be “taken off hair-trigger alert.” What is usually meant by “de-alerting” is to make physical changes to the weapons system which impose a delay between a decision to launch and the irrevocable step that actually starts the launch. Separating the warheads from the rockets and storing them at a distance, or doing the same with any essential component, would be sure methods of introducing delay, and several others have been suggested. Obviously any unavoidable delay of that kind would make LoW impossible. But de-alerting is completely different from simply abandoning the policy of Launch on Warning.

To abandon LoW does not reduce the alert status of the nuclear force. Unfortunately, when this change of policy has been recommended by prestigious bodies (including the Canberra Commission and the Brookings Institution) it has not been clearly distinguishing from de-alerting. De-alerting would greatly reduce the risk of nuclear war started by an impetuous decision, as well as eliminating the risk of launch on a false warning, but it would be far more difficult to implement. RLOAD or NO-LoW is not to be regarded as an alternative to de-alerting, which is highly desirable. It is put forward as an essential measure to reduce immediately the risk of accidental war from a false warning, until more permanent and less easily reversible measures, like de-alerting, or better the total elimination of national nuclear arsenals, can be put in place.

On any rational view, it is essential to eliminate this risk of instant destruction of both these great countries, and the whole of our civilization, by

a mere accident. We have been lucky to survive this long.

There seems to be no prospect of the US and Russian governments giving up “nuclear deterrence” in the near future, but ‘RLOAD’ is compatible with deterrence, as explained below, and is relatively easy to achieve. In contrast, it seems hardly possible to frame a *de-alerting* plan that would retain the essentials of deterrence. The enforced delays would have to be equal for the two adversaries, for all their types of long-range missiles including those in submarines. The actual delay times would have to be verifiable, and continually verified either by international observers or by observers from the opposite side. These conditions would be difficult or impossible to achieve. At the least it would require extensive study by experts, followed by a formal agreement or treaty. The process would take years, and perhaps end in failure. All that time, the world would still be at risk.

The elimination of launch-on-warning would not eliminate any other retaliatory options nor reduce the alert status. RLOAD would merely ensure that retaliation did not take place unless there had been a nuclear detonation. It would delay the retaliatory strike by only a few minutes. A false warning would be immediately revealed as such when the predicted time had passed for the first missiles to arrive and no detonation had been detected; and there would be no launch.

No-LoW is compatible with deterrence

The purpose of deterrence is to prevent either side from making a nuclear attack. This is theoretically achieved by each side convincing the other that any attack will bring unacceptable retaliation. The theory of deterrence relies on the assumption that the ultimate decision makers on both sides act rationally and can be persuaded that it would be folly to launch an attack. Deterrence only fails if one side believes it can launch such a rapid and massive surprise nuclear strike that it will prevent the other side from retaliating.

Launch-on-warning is a response to the fear that the enemy’s first salvo, or a devastating electromagnetic pulse (EMP), might prevent a retaliatory strike. The military on both sides have planned as though it would be *essential* for retaliation to be achieved after a “first strike” has been launched. That is not so. Retaliation does nothing to stop the warheads that are already on the way to their targets, nor the second salvo which the enemy may launch when he sees retaliatory warheads on their way. Irreparable damage to the attacked country is already inevitable, once an attack has been launched.⁸

It is not a *risk* that retaliation *might fail* which would impair deterrence, but a *certainty* (or very near certainty) on the part of the potential attacker that it *will fail*. The following considerations show that, as things are at present, neither side can be certain that retaliation would fail.

First, as regards an EMP attack, it is known to both sides that great efforts have been made to screen military electrical equipment from the pulse. Therefore it is not possible to be sure that EMP will be effective against land-based missiles. Submarines and the missiles they carry are known to be completely protected by sea water.

Neither can an attacker be sure that a “disarming first strike” will be successful, as the following discussion will show.

The United States uses the space-based Nuclear Detonation Detection System (NUDET) to detect, locate, and report to the Strategic Command Centers, any nuclear explosion in the earth’s atmosphere or nearby space. NUDET either supplements or replaces the hundreds of ground-based “bomb-alarms” that were installed near military bases and big cities in 1974.⁹

Russia currently employs optical and seismic sensors to detect nuclear explosions. Their policy is believed to be Launch on Warning, which, as in the US system, would only be ordered by the National Command Authority. They also have a backup system called “Perimetr” to ensure retaliation in the event of an attack that has disabled the National Command Authority before it can order retaliatory launch during flight of the incoming warheads. Positive signals from the sensors are a prerequisite to any launch ordered by the “Perimetr” system, activation of which is described in the footnote.¹⁰ Thus Perimetr cannot effect a “launch on warning.” In the event that LoW has failed, it can, if previously activated, effect launch *after detonation*.

A change from launch-on-warning to No-LoW would be accompanied, in the American system, by feeding any positive signals from the bomb detectors directly to the launch silos as well as to the command centers, so that the destruction of command centers would not prevent a retaliatory strike. In the Russian system the mechanism is already there. The National Command Authority would simply issue its authorization to Perimetr as soon as retaliation to the attack had been provisionally authorized. Perimetr would issue the launch codes by radio as soon as a detonation was detected.

On both sides, retaliation would be ensured (if already authorized) immediately upon a detonation, by having the launch silos carry out all steps toward launch except the final one during the flight of in-

coming missiles, just as they do under launch-on-warning. On receipt of a bomb signal at the predicted time of arrival of attack, retaliation would be launched immediately, from all silos not already destroyed by the attack. If no detonation was detected at the predicted time of arrival, the silos would revert to peacetime readiness.

Just five per cent of the 2,000 warheads at LoW would be enough to destroy the attacking country. No head of state or commander-in-chief could be certain that an initial salvo could put more than 95 percent of the weapons of his adversary out of action within half a minute of the first detonation. Thus a massive disarming first strike could not in fact be relied upon to prevent retaliation.

These arguments should be sufficient to persuade the military on both sides that the policy of LoW, which they know to be dangerous, is *not* essential and must be replaced by RLOAD—Retaliatory Launch Only After Detonation.

If the military establishment on either side is not persuaded to abandon launch-on-warning, then the head of state must balance the elimination of a very definite risk of accidental war due to a false warning, against the hypothetical possibility of the enemy launching a first strike because he judged that RLOAD had weakened deterrence. He should refuse to authorize launch before a detonation has taken place.

There is no logical reason to maintain launch-on-warning. It is to the equal advantage of both sides even if only one changes its policy to No-LoW, and if both adopt No-LoW then one of the most likely causes of a nuclear war between Russia and the U.S.—an accidental war due to a false warning—will be eliminated.

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Footnotes

¹ Launch on Warning and the related term “Launch under Attack” (LUA) are not always used consistently, and this has caused confusion. In the US Defense Department Dictionary of Military Terms (www.dtic.mil/doctrine/jel/doddict/), LUA has a definition exactly the equivalent of our definition of LoW. Russian military experts use LUA to mean the delivery of a retaliatory nuclear strike “in response to an actually delivered strike”, i.e. after nuclear detonations have been confirmed (see Valery Yarynich, *C3: Nuclear Command, Control, Cooperation*. Washington, D.C.: Center for Defense Information, 2003, pp. 28-30.) Also, a retired British military officer explained that “launch on warning” can mean to him the launch of a pre-

emptive strike when there is convincing evidence from human sources that an enemy nuclear attack is in imminent, but no enemy missiles have yet been launched.

² Geoffrey Forden, "Reducing a Common Danger: Improving Russia's Early Warning System," *Cato Policy Analysis* No. 399, May 3, 2001.

³ "The bias in favor of launch on electronic warning is so powerful that it would take enormously more presidential will to withhold an attack than to authorize it." Bruce G. Blair, president, Center for Defense Information, February 16, 2004.

⁴ According to the Center for Defense Information, from 1977 through 1984, early warning systems generated 20,784 false indications of missile attacks on the United States. More than 1,000 of these were serious enough to require "a second look." "Accidental Nuclear War: A Rising Risk?" *The Defense Monitor*, vol. 15 no. 7 (1986).

⁵ Alan Phillips: "20 Mishaps that might have started Accidental Nuclear War."

⁶ "Taking Nuclear Weapons Off Hair-Trigger Alert", Bruce Blair, Harold Feiveson and Frank N. von Hippel, *Scientific American* (November 1997). See also: David Hoffman, "Cold War Doctrines Refuse to Die," *Washington Post*, March 15, 1998, p.A1.

⁷ This is not an attempt to estimate an actual probability. The probability of a threat conference coming to the wrong conclusion cannot be determined. The numbers here are simply to

illustrate the danger of continuing to accept any very small risk for a long period of time.

⁸ We intentionally take no account here of "Ballistic Missile Defense." No claim has been made that such defense could mitigate a full-scale attack by the US or Russia.

⁹ Department of Defense Appropriations for 1974, Hearings before the Subcommittee of the Committee on Appropriations, House of Representatives, 93rd Congress, 1st sess., part 7, p. 1,057.

¹⁰ The operation of the Russian Perimetr system is described by Yarynich in "C3: Nuclear Command, Control Cooperation," pp. 157 -158. During a high-level alert, the National Command Authority issues preliminary authorization to a super hardened radio command and control center. The crew working at the center prepares to transmit a launch order by means of Perimetr command missiles which radio the launch codes to the silos. The launch order is transmitted only if three conditions are simultaneously met: the preliminary authorization has been received, there has been a complete loss of communications with the NCA, and positive signals of nuclear detonations are received from the different types of sensors. Obviously, Perimetr cannot order Launch on Warning. Its purpose is to order "Launch After Detonation," but only if first activated by the NCA and then NCA communication is lost. sources that an enemy nuclear attack is in imminent, but no enemy missiles have yet been

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