



Science for Peace

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This issue of *The Bulletin* is dedicated to Shirley Farlinger, who has recently retired after many years' service as our editor. Thank you, Shirley, for all your past (and present) work on behalf of Science for Peace and, of course, the whole peace movement.

President's Letter: Science and Reason

Judith Deutsch

This year Science for Peace celebrates its 30th anniversary. We can look back with pride at our history of vibrant, challenging discussions of the many life-and-death threats of these times: nuclear war and expansion of the military; climate change (including its roots in the carbon economy); runaway capitalism; and the enormous human toll from severe poverty, racism, and political oppression.

We cannot diminish the importance of discussion and education. Veteran Science for Peace members John Valleau and Paul Hamel now research and educate about the alarming decline of the university in its essential role as the public place of the free-thinking intellectual in the face of privatization and corporatization. Discussion and education provide the necessary foundation of democracy, for how can there be democracy with an uninformed electorate?

A rather startling instance of the compromised university can be found in the fact that the University of Toronto library system, one of the world's best, still does not carry James Hansen's 2009 book *Storms of My Grandchildren: The Truth about the Coming Climate Catastrophe and Our Last Chance to Save Humanity*. However, the library carries many copies of the speculative (and irresponsible) climate books by James Lovelock and Bjorn Lomborg.

Education is perhaps more crucial now than at any other time in history as we face threats of extinction through the use of nuclear weapons and through climate change. Science for Peace brings together scholars from many fields to challenge and discuss issues, a practice which is a corrective antidote to compartmentalization and simplification.

In this Letter I want to present two ideas from my own field, psychoanalysis.

Freud characteristically aimed to understand the whole picture and so was constantly asking what was missing. Eventually, his clinical observations led him to a conceptual structure of categories (or perspectives or points of view) that can be likened to map projections. Each projection carries different information, and the information from various projections relate to each other in numerous and varied ways. In order to approach a "complete" picture, one would have to have a

conceptual understanding of the contributions from all the projections.

Here are examples using a range of points of view.

1. Kyoto Protocol and the Military.

(I use here *environmental, political science, sociology, history, psychology, international law perspectives*) Al Gore, as vice president, was instrumental in the military receiving an exemption under the Kyoto Protocol. Sara Flounders puts it bluntly: "By every measure, the Pentagon is the largest institutional user of petroleum products and energy in general...any talk of climate change which does not include the military is nothing but hot air." In addition to the enormous amount of jet fuel and bunker fuel that are exempt, emissions not counted are US bases and outsourced military. What are the life cycle emissions from military transport, weapons, manufacturing, disposal and rebuilding? With so much destruction, wouldn't there be extensive use of steel and cement, the most carbon-intensive products? What are the emission equivalents of destroyed carbon sinks due to defoliation – from U.S. carpet bombing in WWII, the Korean War, Vietnam, Cambodia, to the present desertification of Iraq?

The military capitalizes on climate change defined as a security threat with the flawed a-historical assumption that poverty, starvation, and natural disasters inevitably elicit violence from starving hordes. For New Orleans, Haiti, for the 25 to 50 million victims of the Late Victorian Holocaust (Mike Davis), violence came from the state, not the destitute people. The destitute increasingly populate prisons, while there is impunity for the perpetrators on corporate boards, in the military, the government, and weapons labs.

2. Carbon Tax.

Here, we should look at emissions and tax structure. Coinciding with the British Columbia carbon tax, for example, is the expansion of B.C. coal mining. It is taxed at the lowest level in years, is exempt under the B.C. carbon tax and is counted as China's emissions. A Canadian Centre for Policy Alternatives (C.C.P.A.) study of the B.C. carbon tax found that "the anticipated impact on emissions, according to the budget, is relatively small. They found that the B.C. tax was progressive during the first year and regressive thereafter. "The richest 20% of BC income earners are responsible for almost double the greenhouse gas (GHG) emissions of those in the lowest income group" (Marc Lee and Toby Sanger: October 2008, "Is B.C.'s Carbon Tax Fair", and April 22, 2010 "Richest 20% of BC

households have biggest carbon footprint”).

The authors suggest a progressive, graduated tax, with revenues used for public transportation and other public goods. A *Globe and Mail* article (Dec 8, 2010 “Carbon pricing won’t hurt Alberta and Saskatchewan: C.D. Howe”) seems to suggest that carbon pricing will affect neither emissions nor corporate wealth and power: “Indeed, setting strict climate policies won’t necessarily cut corporate profits or lead to investment capital fleeing capital, the report says, because carbon-pricing policies can be set up to recycle any extra revenue through corporate tax cuts.”

3. Cars vs. Food.

A suppressed World Bank study attributed 70% of food price increase to the diversion of food for bio-fuels. The grain required to fill an SUV’s 25-gallon tank with ethanol just once will feed one person for a whole year. Bio-fuels underlie much land confiscation in Africa and deforestation of the Amazon and Congo basins and much of Indonesia. The car footprint includes massive energy and water to source the materials and manufacture cars and their electronic components. According to Lester Brown, it is far more profitable for farmers to sell water to industry than to use the equivalent amount for farming. Car manufacturing leads to an additional loss of cultivable land as the addition of 12 million cars each year consumes, counting new roads highways, and parking lots, roughly one million hectares of land, enough to feed nine million people if it were all cropland. The United States, with its 214 million cars, has paved 6.3 million kilometres of roads, enough to circle the earth at the equator 157 times (Lester Brown, *Plan B* p. 49). This loss of farmland will not be remedied by hybrids. Other externalities include war to secure resources (include all the military emissions), outsourcing labour and depressed wages.

The second idea from Freud that I want to mention is more narrowly psychological. Freud observed how people often detach idea from feeling, sometimes to ward off discomfort or tension. I often notice discrepancies and incongruity in reports about the climate emergency as if the emotional quality of *emergency* itself is not well-integrated with the thinking. For example, in one of his books, so invaluable for their data, Lester Brown writes that 80% of South American glaciers will disappear in the next 15 years. “For countries like Bolivia, Peru, and Ecuador which rely on glaciers for water for household and irrigation use, *this is not good news.*”[my italics] *Not good news* is a remarkably un-

derstated feeling about an emergency and perhaps functions to distort a realistic perception of our dire situation.

Science for Peace continues to grapple feelingly with the whole picture, with reality.

Mapping a Freedom to Learn: Why Students Must Maintain Their Right to Organize on Canadian Campuses

Angela Regnier

Our contemporary university and college campuses are sites of great transformation these days. Corporate donors are driving academic programs and research projects, governments are clawing back funding, and students are increasingly treated as consumers of education. These shifts have led to concerns about how academic freedom can be honoured when universities subscribe to a business model rather than the democratic governing structures fought for by faculty and students in the 1960s.¹ The consumer model of education is damaging students’ ability to collectively engage in their spaces of learning on Canadian campuses. This is why it is so important to revisit the purpose of higher education, and to assert the conditions under which we can realize its goals.

The purpose of higher education is to foster independence of mind and critical thinking for the greater common good.² “Freedom of inquiry” rests at the core of academic freedom. Historically, academic freedom contained two components: *Lehrfreiheit* (the freedom to teach); and *Lernfreiheit* (the freedom to learn). But the freedom to learn, or student academic freedom, made few strides in North America.³ Nonetheless, students organized effectively to establish student unions and to gain representation on university governance structures where they have established an effective collective voice in collegial models across the country. It is this collective representation that has most effectively enabled faculty to implement safeguards for academic staff in Canada. Through the power of collective bargaining and other associational

activities, academics in Canada now have the principles of academic freedom secured in their working conditions. However, students likewise require associational protections to effectively participate in the discourse shaping their learning conditions.

Unfortunately, only two provinces⁴ in Canada have legislated associational protections for student unions, including their right to fee collection, access to membership lists, and other protections ensuring their right to organize⁵ autonomously from the scrutiny of their respective university administrations. Ontario, which contains a large proportion of Canadian universities and colleges, has no legislation protecting students' right to associate – a fundamental freedom in the Canada Charter of Rights and Freedoms. This has led to disturbing incidents on Ontario campuses in which student unions and administrations have disputed students' rights to association. In 2010, Carleton University, for example, withheld student union fees as they attempted to negotiate away expressive and associational freedoms in a memorandum of agreement.⁶ These are now subject to university guidelines which entitle the university to withhold fees from student unions they deem to have “significant constitutional or procedural irregularities”.⁷ In 2003, the University of Toronto intervened to halt the collection of student fees from three campus student unions because they disagreed with the results and processes of a referendum on membership in the Canadian Federation of Students. They then withheld over two million dollars in student association fees.⁸ In recent years, the University of Toronto provost has indicated an interest in modifying guidelines on student fee collection by allowing to possible changes allowing students to withdraw from their associations⁹ despite the fact that the

Supreme Court of Canada has affirmed, in the labour context, compulsory association as a necessary component of associational freedom.¹⁰

In Australia, the disastrous effects of student union voluntarism legislation implemented in 2006 have resonated quite significantly on the student experience. The legislation has become widely unpopular and has become subject to review. A study released in 2008 reported that the legislation had led to a loss of funding for campus groups and core services offered to students on campuses, including a reduction in athletics, recreation, and social and cultural activities.¹¹

Students unions applauded when legislation was tabled in Ontario to recognize the independence of student unions from university administrators. On Tuesday, April 19, 2011, Bill 184, the *College and University Student Associations Act*, was introduced to the Ontario legislature, proposing to enact legislation:

[To] recognize the autonomy of student associations at post-secondary educational institutions, to provide for the good governance of student associations, to require accountability of student associations to their members, to promote collaboration and agreement between student associations and post-secondary educational institutions and to ensure the collection and remittance by post-secondary educational institutions of fees levied by student associations. (*Bill 184, College and University Student Associations Act*)¹²

The bill seeks to clarify student union autonomy and accountability to its membership in Ontario. It further stipulates fee collection remittance by universities for student unions. The act, if adopted as legislation, would greatly assist in leveling the power relations that currently exist between university administrations and student unions. Unfortunately, the bill will not be considered for enactment since the writ for the provincial election has been dropped.

The protection of student learning conditions is significantly linked to the right of students to associate independently of administrative or government interference. In order for students to work closely with faculty and staff associations to uphold democratic principles in higher education, free of corporate interference, with the ultimate goal of academic freedom, student union-busting must be deterred. It is by vigilant protection of these rights, as eloquently stated in the University of Toronto's Statement of Institutional Purpose¹³ that students will continue to support higher education in order to achieve goals working towards a common good.

Ontario, which contains a large proportion of Canadian universities and colleges, has no legislation protecting students' right to associate – a fundamental freedom in the Canada Charter of Rights and Freedoms.

References

- 1 Horn, Michiel. 1998. *Academic Freedom in Canada: A History*. University of Toronto Press: Toronto.
- 2 Finkin, Matthew H. and Robert C. Post. 2009. *For the Common Good: Principles of American Academic Freedom*. Yale University Press: New Haven.
- 3 Horn, 1998.
- 4 In British Columbia College and Institute Act. [RSBC 1996] CHAPTER 52 and University Act. [RSBC 1996] CHAPTER 468; and in Quebec An Act respecting the accreditation and financing of students' associations. R.S.Q., chapter A-3.01
- 5 Canadian Federation of Students Right to Organize Policy: "All students have the right to organize and participate in democratic, autonomous student organizations which responsibly represent all students on their respective campuses.
"All student organizations have the right to:
 1. access their membership lists, including names, addresses, and telephone numbers;
 2. incorporate, independent of the institution's administration;
 3. access all technical services, such as printing services, audio-visual services, and computer services, which are available at the institution;
 4. sufficient, on-campus office space without charge;
 5. participate in political actions such as boycotts, walkouts, demonstrations or strikes without fear of recrimination;
 6. have their fees collected by the administration when properly authorized by the student organization;
 7. publicize their activities in reasonable places; and
 8. independent media services."
- 6 For more information on this matter, see http://www.gsacarleton.ca/index.php?section_id=310
- 7 Governing Council of the University of Toronto, Policy for Compulsory Non-Academic Incidental Fees, <http://www.governingcouncil.utoronto.ca/policies/compfees.htm>
- 8 "University slams CFS Referendum: Admin Cites Problems in Vote", *The Varsity*, Feb 27, 2003, <http://thevarsity.ca/articles/13400>
- 9 "Provost's Advisory Committee Suspended: Students Given Ultimatum to Declare Participation" *The Varsity*, December 4, 2008. <http://thevarsity.ca/articles/6300>
- 10 Lavigne v. Ontario Public Service Employees Union, [1991] 2 S.C.R. 211, 81 D.L.R. (4th). In this ruling, it states: "An opting-out formula could seriously undermine the unions' financial base and the spirit of solidarity so important to the emotional and symbolic underpinnings of unionism".
- 11 Voluntary Student Unionism (VSU) Impact Study, Jointly commissioned by ACUMA Incorporated and Australian University Sport, 2008, http://www.acuma.org.au/resource_library/vsu/vsu_impact_study/index.htm
- 12 Bill 184, College and University Student Associations Act, Government of Ontario http://www.ontla.on.ca/web/bills/bills_detail.do?locale=en&Intranet&BillID=2488
- 13 <http://www.governingcouncil.utoronto.ca/policies/mission.htm>

The US Military Assault on Global Climate

H Patricia Hynes

By every measure, the Pentagon is the largest institutional user of petroleum products and energy... Yet the Pentagon has a blanket exemption in all international climate agreements... Any talk of climate change which does not include the military is nothing but hot air. It's a hole [in the Kyoto Convention on Climate Change] big enough to drive a tank through.

In 1940 the US military consumed one percent of the country's total energy usage; by the end of World War II the military's share rose to 29 percent.¹ Oil is indispensable for war. Correspondingly, militarism is the most oil-exhaustive activity on the planet, growing more so with faster, bigger, more fuel-guzzling planes, tanks and naval vessels employed in more intensive air and ground wars. At the outset of the Iraq War in March 2003, the Army estimated it would need more than 40 million gallons of gasoline for *three weeks of combat*, exceeding the total quantity used by all Allied forces in the four years of World War I. Among the Army's armamentarium were 2,000 staunch M-1 Abrams tanks fired up for the war and burning 250 gallons of fuel per hour.²

The US Air Force (USAF) is the single largest consumer of jet fuel in the world. Fathom, if you can, the astronomical fuel usage of USAF fighter planes: the F-4 Phantom Fighter burns more than 1600 gallons of jet fuel per hour and peaks at 14,400 gallons per hour at supersonic speeds. The B-52 Stratocruiser, with 8 jet engines, guzzles 500 gallons per minute; 10 minutes of flight uses as much fuel as the average driver does in one year of driving! A quarter of the world's jet fuel feeds the USAF fleet of flying killing machines; in 2006, they consumed as much fuel as US planes did during the Second World War (1941-1945) – an astounding 2.6 billion gallons.³

Barry Sanders observes with a lode of tragic irony that, while many of us assiduously reduce our carbon footprint through simpler living, eating locally, recycling and reusing, energy conservation, taking public transportation, installing solar panels, and so on, the single largest institutional polluter and contributor to global warming – the US military – is immune to cli-

mate change concerns. The military reports no climate change emissions to any national or international body, thanks to US arm-twisting during the 1997 negotiations of the first international accord to limit global warming emissions, the Kyoto Protocol on Climate Change. To protect the military from any curbs on their activities, the United States demanded and won exemption from emission limits on “bunker” fuels (dense, heavy fuel oil for naval vessels) and all greenhouse gas emissions from military operations worldwide, including wars. Adding insult to injury, George W. Bush pulled the United States out of the Kyoto Protocol as one of the first acts of his presidency, alleging it would straitjacket the US economy with too costly greenhouse emissions controls. Next, the White House began a neo-Luddite campaign against the science of climate change. In researching *The Green Zone: The Environmental Costs of Militarism*, Sanders found that getting war casualty statistics out of the Department of Defense is easier than getting fuel usage data.

Only recently has the momentous issue of military fuel use and its massive, yet concealed role in global climate change come to the foreground, thanks to a handful of perspicacious researchers. Liska and Perrin contend that, in addition to tailpipe emissions, immense “hidden” greenhouse gas pollution stems from our use of gasoline. This impact on climate change should be calculated into the full life cycle analysis of gasoline. When the Environmental Protection Agency (EPA) compares gasoline and biofuels for their respective atmospheric pollution, the greenhouse gas emissions calculated for gasoline *should include the military activities* related to securing foreign crude oil, from which gasoline is derived. (But they do not, thanks to the Kyoto Accords military exemption). Oil security comprises both military protection against sabotage to pipelines and tankers and also US-led wars in oil-rich regions to assure long-term access. Nearly 1,000 US military bases trace an arc from the Andes to North Africa across the Middle East to Indonesia, the Philippines and South Korea, sweeping over all major oil resources – all related, in part, to projecting force for the sake of energy security. Further, the “upstream emissions” of greenhouse gases from the manufacture of military equipment, infrastructure, vehicles and munitions used in oil supply protection and oil-driven wars should also be included in the overall environmental impact of using gasoline. Adding these factors into their calculations, the authors conclude that about “20 percent of the conventional DoD [Department of Defense] budget...is attributable to the objective of oil

security.”

A corresponding analysis by researchers at Oil Change International quantifies the greenhouse gas emissions of the Iraq war and the opportunity costs involved in fighting the war rather than investing in clean technology, during the years 2003-2007. Their key findings are unambiguous about the vast climate pollution of war and the lockstep bipartisan policy of forfeiting future global health for present day militarism.

1. The projected full costs of the Iraq War (estimated \$3 trillion) would cover “*all of the global investments in renewable power generation*” needed between now and 2030 to reverse global warming trends.
2. Between 2003-2007, the war generated at least 141 million metric tons of carbon dioxide equivalent (CO₂e)⁴, *more each year of the war than 139 of the world’s countries release annually*.⁵ Re-building Iraqi schools, homes, businesses, bridges, roads, and hospitals pulverized by the war, and new security walls and barriers will require millions of tons of cement, one of the largest industrial sources of greenhouse gas emissions.
3. In 2006, the U.S. spent more on the war in Iraq than the entire world spent on renewable energy investment.
4. By 2008, the Bush administration had spent 97 times more on military than on climate change. As a presidential candidate, President Obama pledged to spend \$150 billion over 10 years on green energy technology and infrastructure – less than the United States was spending in one year of the Iraq War.

Just how much petroleum the Pentagon consumes is one of the best-kept secrets in government. More likely, observes Barry Sanders, no one in DoD knows precisely. His unremitting effort to ferret out the numbers is one of the most thorough to date. Sanders begins with figures given by the Defense Energy Support Center for annual oil procurement for all branches of the military. He then combines three other non-reported military oil consumption factors: an estimate of “free oil” supplied overseas (of which Kuwait was the largest supplier for the 2003 Iraq War); an estimate of oil used by private military contractors and military-leased vehicles; and an estimate of the amount of bunker fuel used by naval vessels. By his calculation, the US military consumes as much as one million barrels of oil per day and contributes 5 percent of current global warming emissions. Keep in mind that the milit-

ary has 1.4 million active duty people, or .0002 percent of the world's population, generating 5 percent of climate pollution.

Yet, even this comparison understates the extreme military impact on climate change. Military fuel is more polluting because of the fuel type used for aviation. CO₂ emissions from jet fuel are larger – possibly triple – per gallon than those from diesel and oil. Further, aircraft exhaust has unique polluting effects that result in greater warming effect by per unit of fuel used. Radiative effects from jet exhaust, including nitrous oxide, sulphur dioxide, soot, and water vapor exacerbate the warming effect of the CO₂ exhaust emissions.⁶ Perversely, then, the US military consumes fossil fuel beyond compare to any other institutional and per capita consumption in order to preserve strategic access to oil – a lunacy instigated by a series of executive decisions.

Short History of Militarizing Energy

Ten of 11 U.S. recessions since World War II have been preceded by oil price spikes...Maintaining low and stable oil prices is a political imperative associated with modern petroleum-based economies.

In 1945 the US military built an air base at Dhahran, Saudi Arabia, the start of securing permanent American access to newly discovered Middle East oil. President Roosevelt had negotiated a *quid pro quo* with the Saudi family: military protection in exchange for cheap oil for US markets and military. Eisenhower possessed great prescience about the post-World War II rise of a permanent war-based industry dictating national policy and the need for citizen vigilance and engagement to curb the “military-industrial” complex. Yet, he made a fateful decision on energy policy which set our country and the world on a course from which we must find our way back.

The 1952 blue ribbon Paley Commission Report proposed that the U.S. build the economy on solar energy sources. The report also offered a strong negative assessment of nuclear energy and called for “aggressive research in the whole field of solar energy” as well as R&D on wind and biomass. In 1953 the new President Eisenhower ignored the report recommendation and inaugurated “Atoms for Peace,” touting nuclear power as the world's new energy miracle that would be “too cheap to meter.” This decision not only embarked the country (and world) on a fateful course of nuclear power but it also affixed the centrality of oil, gas and coal within the US economy.

By the late 1970s the Soviet invasion of Afghanistan and the Iranian Revolution threatened US access to oil in the Middle East, leading to President Carter's 1980 State of the Union warmongering doctrine. The Carter Doctrine holds that any threat to US access to Middle East oil would be resisted “by any means necessary, including military force”. Carter put teeth into his doctrine by creating the Rapid Deployment Joint Task Force, whose purpose was combat operations in the Persian Gulf area when necessary. Ronald Reagan ramped up the militarization of oil with the formation of the U.S. Central Command (CENTCOM) whose *raison d'être* was to ensure access to oil, diminish Soviet Union influence in the region, and control political regimes in the region for our national security interests. With growing reliance on oil from Africa and the Caspian Sea region, the U.S. has since augmented its military capabilities in those regions.

In 2003, Carter's doctrine of *force when necessary* was carried out with “shock and awe,” in what was the most intensive and profligate use of fossil fuel the world has ever witnessed. Recall, too, that as Baghdad fell, invading US troops ignored the looting of schools, hospitals, and a nuclear power facility as well as the ransacking of national museums and burning of the National Library and Archives holding peerless, irreplaceable documentation of the “cradle of civilization.” The US military did, however, immediately seize and guard the Iraqi Oil Ministry Headquarters and positioned 2,000 soldier to safeguard oilfields.⁷ First things first.

Many factors have converged and clarified over time to support the proposition that, at its core, the Iraq war was a war over oil. Eliminating weapons of mass destruction, deposing a tyrannical dictator, rooting out terrorism linked to 9/11, employing gunboat diplomacy to instill democracy and human rights – all were largely foils for oil. Alan Greenspan put it squarely: “I am saddened that it is politically inconvenient to acknowledge what everybody knows: the Iraq War is largely about oil.”⁸

As we near peak oil production, that is, the point of diminishing returns for oil exploration and production and higher oil prices, OPEC countries' share of global production “will rise from 46 percent in 2007 to 56 percent in 2030.” Iraq has the third largest reserves of oil; Iraq and Kazakhstan are “two of the top four countries with the largest [petroleum] production increases forecast from 2000 to 2030. The Middle East and Central Asia are, predictably, epicenters of US military operations and wars. A 2006 report on national

security and US oil dependency released by the Council on Foreign Relations concluded that the US should maintain “a strong military posture that permits suitably rapid deployment to the [Persian Gulf] region” for at least twenty years. US military professionals concur and are preparing for the prospect of “large-scale armed struggle” over access to energy resources.

Where we stand

Our national security has reduced in large part to *energy security*, which has led us to militarizing our access to oil through establishing a military presence across the oil-bearing regions of the world and instigating armed conflict in Iraq, sustaining it in Afghanistan, and provoking it in Libya. The air war in Libya has given the new U.S. Africa Command (AFRICOM) – itself another extension of the Carter Doctrine – some spotlight and muscle. A few commentators have concluded that the NATO war in Libya is a justifiable humanitarian military intervention. The more trenchant judgment, in my view, is that the air war violated the UN Security Council Resolution 1973, the US Constitution, and the War Powers Act; and that it sets a precedent and “model for how the United States wields force in other countries where its interests are threatened,” to quote Administration officials. The air war in Libya is another setback to non-militarized diplomacy; it marginalized the African Union, and it sets a course for more military intervention in Africa when US interests are at stake. Air war a model for future wars? If so, a death knell for the planet. This insatiable militarism is the single greatest institutional contributor to the growing natural disasters intensified by global climate change.

Postscript

In summer 2011, as I was researching this piece, forest fires burned almost 50,000 acres in and around the nuclear weapons production and waste storage facilities at the Los Alamos National Laboratory. Among the endangered radioactive materials and waste were as many as 30,000 55-gallon drums of plutonium-contaminated waste stored in fabric tents above ground, awaiting transport to a low-level radiation dumpsite in southern New Mexico. Two months later Vermont suffered its worst ever floods and flood damage, with no part of the state untouched, from Tropical Storm Irene – considered to be one of the 10 costliest disasters in US history.

Coincident with these environmental tragedies intensified by global warming, is the ongoing tradeoff in

the U.S. federal budget between militarized defense and genuine human and environmental security. The United States contributes more than 30 percent of global warming gases to the atmosphere, generated by five percent of the world’s population and U.S. militarism. The pieces of the U.S. federal budget pie that fund education, energy, environment, social services, housing, and new job creation, taken together, receive less funding than the military/defense budget. Former Secretary of Labor, Robert Reich, has called the military budget a taxpayer-supported jobs program and argues for re-prioritizing federal spending on jobs in green energy, education and infrastructure – the real national security.

The United States has the wealth (currently larding the defense budget) and the technical capacity to revolutionize our energy economy and turn it within a few decades into an economy based on efficiency and renewable energy sources, thus removing a critical demand factor of our Goliath military. How costly would it be to eliminate underlying causes of war and injustice, such as poverty and gender inequality, and to restore the natural environment? In his most recent book *Plan B 4.0: Mobilizing to Save Civilization*, Lester Brown estimates that eradicating poverty, educating women, providing reproductive resources, and restoring forests worldwide would cost one-third of the U.S. 2008 defense budget. Again, the issue is not public monies.

Another ferocious demand factor is the octopus of defense industry companies who have spread their tentacles to nearly all of the states and control the majority of Congressionals. Thus, another vital scarce resource – some mineral in a contested seabed in the South China Sea, for example – could replace petroleum and become the next flashpoint for more military build-up and response, unless that military-industrial complex is neutered.

Perhaps the most elusive driving factor of war is the values that underpin the tradition and habit of militarized solutions. War mirrors the culture of a country. U.S. militarism – from its training, tactics, and logistics to its reasons for going to war and its weapons of war – is distinctly shaped by core elements of American identity. These determining cultural forces are, according to military historian Victor Davis Hanson: manifest destiny; frontier mentality; rugged individualism and what he calls a “muscular independence”; unfettered market capitalism; the ideal of meritocracy (no matter what one’s class, one can rise to the top in the U.S. military); and a fascination with machines, modernity, and

mobility. All converge to generate bigger, better and more destructive war technology. He adds that the integration of military into society is smoothed through the Second Amendment right to bear arms.

This cultural competence for high-tech war, with its origins in our past annihilation of Native Americans, may be our society's nemesis unless we do critical soul-searching about our cultural and personal values and actively engage in transforming them. There are a plentitude of cross currents in our society that have profoundly challenged the dominant cultural profile limned by militarist Hanson: the women's, civil rights, and immigrant rights movements, the anti-war and peace movements, public intellectuals and progressive media, peace and justice studies, progressive labor and health workers, the co-op and Transition Town movements, and the handful of progressive politicians, among others. The challenge is how to build voice, social cohesion, and public influence for our shared values of a sense of community, connection to nature, concern for the exploited, and thirst for equity and justice against the dominant market messages of wealth and social prestige; image; power through dominance in gender, race and economic relations; and meeting conflict with force.

References

- 1 Barry Sanders. (2009) *The Green Zone: The Environmental Costs of Militarism*. Oakland, CA: AK Press. p. 39.
- 2 *Ibid.* p. 51.
- 3 *Ibid.* pps. 50, 61 for data in this section.
- 4 Units of carbon dioxide equivalent to combined greenhouse gas emissions.
- 5 This figure is conservative because there were no reliable numbers on the military consumption of naval bunker fuels for the transport of fuel and troops. Nor was there data on the use or release of intensive greenhouse gas chemicals in war, including the halon, an ozone-depleting fire extinguishing chemical banned in the US since 1992 for civilian production and use, but allowed for DoD "critical mission" use.
- 6 From George Monbiot (2006). *Heat: How to Stop the Planet from Burning*. Cited in Sanders, p.72
- 7 Chalmers Johnson. (2010) *Dismantling the Empire: America's Last Best Hope*. New York: Metropolitan Books. pp.40-51.
- 8 Quoted in Liska and Perrin
<http://www.environmentmagazine.org/Archives/Back%20Issues/July-August%202010/securing-foreign-oil-full.html>

"A nation that continues year after year to spend more money on military defense than on programs of social uplift is approaching spiritual death."
--Martin Luther King

Resources for Education and Action

Bring the War Dollars Home, a growing movement at the state and city/town level, uses the National Priorities Project data to make the case for ending the wars in Afghanistan and Iraq and redirecting defense spending to genuine domestic security. See <http://ourfunds.org/> and <http://www.bringourwardollarshome.org/>

National Priorities Project is a think tank and advocacy group that provides research designed to influence U.S. federal spending priorities. Includes data on costs of wars, local taxes for war, and tradeoffs.
<http://nationalpriorities.org/>

Progressive Caucus Budget for 2012, also known as The People's Budget. <http://cpc.grijalva.house.gov/index.cfm?sectionid=70> is an alternative budget offered by the 81-member Congressional Progressive Caucus that takes steps toward a saner role for government while reducing the deficit more and faster than either Ryan's "Plan for Prosperity" or Obama's plan.

Peace and Conflict Studies Programs. 215 accredited peace and conflict studies graduate programs & grad schools on the leading graduate school website <http://www.gradschools.com/search-programs/conflict-peace-studies>

Peace and Justice Studies Association.
<http://legacy.earlham.edu/~psa/>

War Tax Resistance. See the website of War Tax Resistance/War Resisters League
<http://www.warresisters.org/wartaxresistance>

Women's International League for Peace and Freedom (WILPF) was founded in 1915 during World War I. WILPF works to achieve through peaceful means world disarmament, full rights for women, racial and economic justice, an end to all forms of violence. http://wilpf.org/US_WILPF

Plus ça change, plus c'est la même chose: A 30 year Retrospective of Science for Peace

Judith Deutsch

This is a mere summary meant to celebrate our history, a selection of some representative activities of Science for Peace on the occasion of its 30th anniversary. Many of the contributions appear prescient. They also suggest a fascinating historical perspective about what was known long before a number of threats and their fateful repercussions became apparent to many people. This summary highlights the important functions and shortcomings of education, giving pause to think about where to go from here in these urgent, critical times. It brings to mind Edward Said's depiction of the Public Intellectual, the free-thinking critics and analysts who are essential to democracy and perhaps to human survival.

Since this is an abbreviated distillation of a great deal of work, we invite SFP members to contribute their accounts of other important projects and discussions.

1981 – An agenda was outlined of sixteen peace topics, among them a chemical warfare study group, seismology for nuclear test ban verification, cruise missile conversion, symposia on war or peace in space, the conversion of the military economy.

1982 – SFP advised the Toronto District School Board on teaching about the perils of nuclear war. Despite considerable support from the Chairman of the

Board and plans for broad outreach, the program was not implemented.

1983 – A focus was the interrelation between development and disarmament. “While involved in development programs, Canada at the same time remains one of the world's leading arms traders.” Another focus was building a consensus among professionals for dealing with the growing destruction of the biosphere and its impact on human health. A significant focus was on education: There were a number of SFP chapters in other cities and universities “to conduct and encourage educational and research activities relating to the dangers of war waged with weapons of mass destruction, especially nuclear weapons”. There was a weekly seminar series in Toronto and a plan to develop a speakers bureau, an education package, and a focus on Jobs with Peace for its main activity during UN Disarmament Week.

1984 – Science for Peace responded to Prime Minister Trudeau's Peace Initiative with a detailed proposal including a government supported Centre for Arms Control and Disarmament, and personal contacts (and twinning) with people in the USSR and countries. The president of SFP and other initiating members were invited to meet with Trudeau.

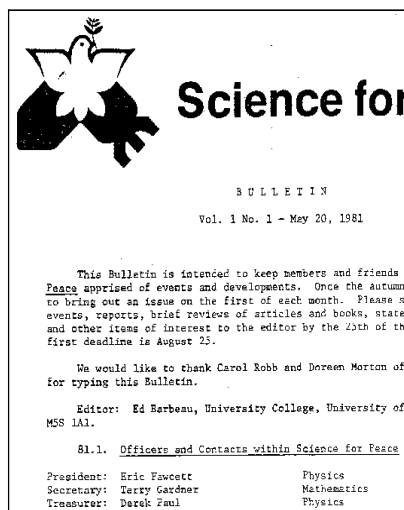
1986 – Message to Mikhail Gorbachev, General Secretary of the Communist Party of the Soviet Union:

The initiatives taken by your government to stop and reverse the arms race and particularly to prevent the development of new weapons have raised the hopes of humanity. The negotiation of a comprehensive test ban preceded by the withholding of further tests and accompanied by a willingness to consider new approaches to verification represents, in the view of the undersigned, the key to reversing the drift to disaster that threatens us all. We hope that pending a considered response by the Western democracies, you will not be provoked to change your course by the refusal so far by the United States to resume negotiations for a comprehensive test ban, which is essential to end the arms race.

-- *George Ignatieff, John Polanyi, Anatol Rapoport*

The inaugural issue of *The Bulletin* (sample image, right) was published in May 1981.

There is a nearly complete set of past issues of *The Bulletin* on Science for Peace's website, scienceforpeace.ca. Issues are in searchable text and in PDF image versions.





Graphic from the January 1987 issue of *The Bulletin*. The moral responsibilities of scientists -- to refuse to participate in war preparations, to act as whistleblowers, to protect freedom of speech, and to work to keep universities free from corporate influence -- have long been a concern for the Science for Peace membership.

1987 – The president of SfP was George Ignatieff, former Ambassador to the UN, actively united peace education and government consultation regarding disarmament and making the UN more effective. SfP also focused on the militarization of outer space and on the military threats to Arctic peoples and environment. There was sharp criticism of corrupting use of scientific knowledge as the basis of “high tech” weapons industry and military systems. Consideration was given to establishing a network of Education Directors in local chapters and of sponsoring round tables at many universities. .

1988 – Hopes and prospects for peace in the Balkans. Nuclear weapons and human rights: the second anniversary of the kidnapping of the Israeli nuclear technician Mordechai Vanunu. International Conference on Arctic Cooperation involving the need for native people to be represented; the broad sub-themes, e.g. sovereignty, ecology, navigation, and surveillance, creating a transnational Arctic nuclear-weapons-free-zone, and environmental and social impact assessment procedures”

1989 – A proposal for an Oath for Scientists, acknowledging that in the absence of ethical standards, science and its products can damage society..

1991 – Non-partisan teach-in entitled “War in the Gulf: the university reflects.” With other academic institutions, SfP helps develop the Toronto Resolution, a code of ethics on academic freedom.

1993 – Focus on the International Day of Action for the Innu and the Earth. SfP joins with other citizens’ groups seeking a World Court advisory opinion on the legality of nuclear weapons.

1994 – Statement on the role of Canada to enhance se-

curity and global stability by assisting in non-violent resolution of conflicts and addressing the causes of conflicts before they occur as opposed to maintain and develop combat forces for territorial defence. Active working groups on ethical considerations in science and scholarship, UN reform, the ozone layer and global climate, and scientific cooperation with Cuba. SfP shifts its interest from the narrower arms control focus that it had in the 1980s to broader concerns: peace includes justice and the environment (from Derek Paul).

1995 – Members of SfP met with the Biological and Chemical Defence Review Committee (BCDRC) concerning possible Canadian testing of chemical agents on humans, on having stocks of tons of chemical weapons, ocean dumping of chemical agents, and overall government secrecy.

Assessing the aftermath of the Cold War:

“The world is in continual expanding crisis, ranging from the destruction of fish stocks (with the threat of species-extinction), to latter-day holocaust in Central Africa, to the threat of massive environmental degradation and social strife in China...Governments command vastly greater resources, both human (in particular, the military) and financial, than NGOs, but the latter seem to offer the better hope of dealing with these complex problems...” (Eric Fawcett).

“Further understanding the depth and complexit of these threats led to seeing the role of people in the humanities, social sciences, natural and engineering sciences, governance, industry and trade, people in education...” (Anatol Rapoport).

1997 – The Lessons of Yugoslavia conference.

1999 – SfP addresses the Indonesian repression after the East Timor referendum, the anti-globalization protest against the WTO in Seattle, the US refusal to sign the Comprehensive Test Ban Treaty, and issues a statement about the NATO-Serbian war.

2001 – Social Responsibility in Science and Technology . Palestine and Iraq: Any Signs of Hope?

2002 – The funding from American military agencies of Canadian university laboratories and projects. How Canada should respond to terrorism and war.

2003 – Preventing the Weaponization of Space.

2004 – Torture at Abu Ghraib. Revisiting the racism of the atomic destruction of Hiroshima and Nagasaki. The Crisis in Haiti.

2005 – SfP looks with more depth at the funding of large research departments at universities, the conflict between academic freedom and the highest

Science for Peace was a co-sponsor of the Zero Nuclear Weapons Forum in November 2009. The event featured lively debate, both at Toronto City Hall and by video link to Hiroshima, London, and Geneva.



standards of research vs. meeting industry interest.

2006 – Launching of the Global Issues Project with a roundtable on forestry, followed by roundtables on food and population, climate change and energy, land use planning, water, militarism, social justice, sustainable cities.

2008 – Fresh Water Problems: Emerging Threats and Urgent Priorities

2009 – Zero Nuclear Weapons: A Forum. Open Letter on Climate Change to the Government of Canada, signed by over 550 Canadian university faculty members. The letter pointed out that the time frame of reductions is critical and should be dictated by earth's physical environment and not by political or short-term economic considerations.

2010 – Climate Reality: James Hansen, Naomi Klein and Clayton Thomas-Muller, SfP members research the corporatization of the university, the decline in education and compromises in academic integrity.

2011 – State-Corporate Complex: A Threat to Freedom and Survival with Noam Chomsky and Linda McQuaig. Another urgent letter to Members of Parliament demanding urgent action on climate change.

Publications

This selection is indicative of the broad range of issues researched and written about by SfP members.

Books:

United Nations Reform: Looking Ahead after Fifty Years (1995)

Arctic Alternatives: Civility or Militarism in the Circumpolar North (1992)

Accidental Nuclear War (1984)

Background papers:

on Nuclear Weapons, Ecological Refugees, Genetically Modified Plants used for Food, the Alberta Tar Sands.

Bulletin Articles and Occasional Papers:

David Parnas (1993): The North American Free Trade Agreement

Irwin Guttman (1993): NAFTA and the Militarization of Canada

Lee Lorch (1994): Working Group on Cooperation with Cuban Science

Margaret Back (1996): The Mines Action Coalition

Paul Hamel (2000): Genetically Modified Food: A Field of Dreams?

Hani Kim (2002): Military Research and Canadian Universities

John Valteau (2002): Organizing a Campaign Against Space Weapons

Hanna Newcombe (2005): Rational Scheme for a Reformed UN Security Council

Paul Hamel (2006): Structural Violence

Derek Paul (2006): Roundtable on Forests

Nick Dyer-Witthford (2007): Military Related Research at the University of Western Ontario

Derek Paul (2008): Brief to the Standing Committee on Industry, Science and Technology

Adele Buckley (2010): Arctic Governance

Phyllis Creighton (2010): An Arctic Nuclear Weapon-Free Zone: Why is now the time?

H. Patricia Hynes (2011): The Silent Casualty of War: The Global Environment



The Arctic has long been an area of concern for SfP members, with a major conference in 1988 followed by a stream of papers and seminars addressing both the military and environmental challenges facing Arctic nations and peoples. Above, HMCS *Louis-St-Laurent* and Coast Guard cutter *Healy*, from an article in the January 2010 *Bulletin*.

Science for Peace members celebrated our organization's 30th anniversary with a dinner in Toronto on September 25. On these pages we present anniversary messages from Peter Nicholls and Marion Dove, together with a reflection by Shirley Farlinger.

On the Shoulders of Giants

Peter Nicholls

We are where we are now because we have stood on the shoulders of giants. I remember several who are no longer with us – Eric Fawcett, founding chair, who introduced me to Science for Peace and kept me from making extravagant blunders; George Ignatieff, father of Andrew who is with us tonight; Terry Gardner, whom we lost only a short while ago, and whose widow Connie is here; and, especially Anatol Rapoport, whose widow Gwen is also here. Anatol was always generous with his time, coming to speak at Brock University and to my sociobiology students more than once (we sent a Cadillac to collect him but I fear Anatol lived in a world where Cadillacs and farm pickups are just the same – a means of transportation). Anatol had the genius to show complexity where things seemed trivially simple (as in his example game of “button-button”) and to simplify situations where paradoxical complexity seemed to reign (as in his program “Tit-for-Tat”, which won the competition for the most successful strategy for playing reiterated Prisoners’ Dilemma). Anatol was Canada’s pre-eminent peace theoretician.

As a founding North American Treaty Organization (NATO) state with no nuclear weapons on its territory, Canada helps to guide others by acting as a kind of peace “staff college” for the movement against nuclear weapons. It currently provides part of the base for Abolition 2000 internationally at the Rideau Institute in Ottawa (where Stephen Staples is active and where I met Lauren Hunter who acted as an efficient recording officer at the Abolition 2000 annual general meeting last week in Geneva).

However, in the United Kingdom, one of the five nuclear weapons states defined by the Nuclear Non-Proliferation Treaty (NPT), we are closer to the front line, the trenches. Earlier this year non-governmental

organizations, think tanks, Ministry of Defence officers, Foreign Office officials and Cabinet Office members discussed the UK’s plans to renew its nuclear weapons submarine fleet some time after 2015. We were in one of the Locarno rooms (named after the treaty that supposedly sorted Europe out after the First World War) and dealt with matters such as warhead numbers. The provisional plans for the new British boats apparently envisage a smaller vessel with only eight missile launch tubes (we were told they needed to find space for the crew and I was happy to note they were not to be drones). The number of warheads per submarine is also to be reduced to a maximum of 40. The policy of continuous 24-hour, seven day a week patrols is under review. The UK’s nuclear deterrent is diminishing. I was reminded of Stephen Jay Gould’s analysis of the evolution of the Hershey bar, getting progressively smaller and more expensive. The final state was to be a bar costing 47 cents and weighing zero grams, sometime around 2015. I think we may see a UK deterrent costing \$47 billion with zero warheads a bit later than that.

However, $40/8=5$, as I pointed out, not needing Anatol to do the math. There are 12 slots for warheads on a Trident II missile, but the actual number of warheads has been considered as being only either three or four - so if there are to be only eight missiles, 24 or 32 warheads would equip them all. Nonetheless, the number of warheads/missile is classified so I was told my calculations were “wrong”! Nonetheless, it does seem to me that, as with a 12-place centrifuge, one can load three, four or six places and keep it balanced. Not five, however, as this would require at least one dummy of the same size and shape...who knows? I suspect that the actual number of functional warheads is much less than the maximum, both now and in the future. Of course, even a single warhead is a potential genocidal device.

The official UK policy on nuclear disarmament, to which the five acknowledged nuclear powers (NWS) are committed by the NPT, resembles Augustine’s prayer for chastity – yes, but not yet. Unlike the cold war situation, the British public now see no need for our remaining a NWS. Nor do many commentators, ex-politicians (including ex-ministers of defence such as Michael Portillo), and some military professionals. General Sir Hugh Beach, once Master of the Ordnance, has just written a “Blackaby” paper entitled “What price nuclear blackmail” for Abolition 2000 UK, demolishing the arguments for deterrence that have been the official basis for maintaining nuclear

weapons for over 60 years (the paper is available as a pdf from www.abolition2000uk.org). Moreover, some governments, including those in NATO, are playing a role in supporting the anti-nuclear movement in various ways. Canada, even under its present conservative administration, votes “yes” on some relevant issues at the United Nations when the three NATO NWS vote “no”, an example being the “de-alerting” resolution (de-alerting introduces some reversible physical change(s) to nuclear weapons or weapon systems in order to lengthen the time required to use nuclear weapons in combat). However, Norway goes further. Cautious as a minor NATO state must be, Norway (like Canada, also not a member of the European Union and also housing no nuclear weapons on its territory), is providing substantial funding for a Geneva office and several personnel appointed to run the new International Campaign to Abolish Nuclear Weapons (ICAN) anti-nuclear weapons campaign (see www.icanw.org and www.ican.org.uk).

What is possible? Canada should become more like Norway. See what you can do.

Peter Nicholls, Colchester, UK (President, 1995-96)

Evolving with the Times

Marion Dove

On behalf of my late parents, John and Lois Dove, I send you 30th birthday greetings from Berlin, Germany.

My parents were active in Science for Peace in the 1980s until their deaths in a motor vehicle accident in 1989 at the ages of 56 and 57. At that time, Science for Peace was mainly pre-occupied with East-West tensions and the risk of nuclear war. Now in 2011, in a very different world, I am temporarily living a stone's throw from the Berlin Wall Memorial in the formerly eastern part of a re-united city and country. This city contains many layers of history which serve as a reminder of the long-lasting consequences of war. We must always be striving for peace.

Since 1989, Science for Peace has evolved with the times and has transferred its focus onto contemporary issues. I will celebrate your 30th birthday with you from afar and wish you all the best for another 30 years of working towards peace.

With warmest regards from
Marion Dove

The Future of Science for Peace

Shirley Farlinger

Originally the work of Science for Peace focused on the science of the nuclear age, a phenomenon that our members saw as a suicidal use of scientific knowledge. We met with some success: the Armageddon we feared did not come to pass.

The present situation is still ominous as more and more countries have obtained nuclear weapons and as the possession of nuclear weapons is still equated with power; hence, the continued need for our organization.

It is appropriate to examine the meaning of “science” and “peace” both today and in the future.

In the time of Francis Bacon, the scientific method was extolled as an unbiased way to understand nature as detached observers. He believed it would allow the human mind to conquer and subdue nature and “shake her to her foundations” “extending the power of dominion of the human race itself over the universe.” What we have seen is the assumption “that the world is made up of objects that can be analyzed in isolation, independent of the larger wholes of which they are a part.”¹

These assumptions have led us down some dangerous paths. Fortunately, science is now moving from the experimental laboratories and lecture halls of old to engaging the wider world and the concept of the “web of life.” The whole world is our “lab.”

As the advance of nuclear technologies has not been ceased, it has become clear that science needs the help of environmentalists, psychologists, philosophers, sociologists and futurists. The membership of Science for Peace can reflect this new perspective.

We face another problem: the use of university researchers who depend on corporate and military funding for their work. About half the research conducted

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in the US is linked to the military sector; this, at a time when the need for research into benign energy, land reclamation, climate change and better international relations is essential. Military companies, worried about a future lack of need for military hardware are taking over the work of governments. Lockheed Martin has taken on the census work in Canada, the US, and the UK.²

The other major change in our mandate involves the concept of peace. Peace is still the absence of war. However, our definition of peace must now include the concepts of peace with the planet and peace among people.

We, as a group, are committed to ending the supply of the instruments of war manufactured in Canada, sold to the United States and used elsewhere in the world.

In fact, we hope for a world without war and the re-deployment of workers from military to civilian production. We question whether the present capitalist system can accomplish this goal. In order to achieve it, we may have to add more economists to our membership.

We have a special interest in the University of Toronto, the alma mater of some of us. Many universities, including the University of Toronto, are in danger of compromising themselves by accepting donations from individuals who hope to influence the curricula.

The corporate influence on science is also evident in the development of genetically modified seeds and pharmaceuticals for the rich (as millions die untreated from malaria, tuberculosis and HIV/AIDS). There is no money to be made from the poor so science is being co-opted by corporations.

The nuclear age is still with us. For example, nuclear byproducts such as depleted uranium enter battlefields. We must continue to oppose the further use of nuclear power, the “Siamese twin of nuclear weapons”, this time with many allies.

If the future of Science for Peace is related to the need for the organization's existence, then it should have a bright future.

Notes

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The New State of South Sudan: An Opportunity for Better Health Care?

Sara Suliman

On July 9th, 2011, “The Republic of South Sudan” was born as a new state in the horn of Africa. The country officially joined the United Nations as the 193rd member on July 14th after over half a century of ongoing tension with North Sudan. The referendum to establish the new state was a response to the stipulation of the Comprehensive Peace Agreement (CPA) between the Sudan Peoples' Liberation Movement (SPLM) and the ruling party in North Sudan, the National Congress Party (NCP), to hold a referendum on self-determination in the South. Although the new state is still suffering from the severe ramifications of the continuous attacks on its infrastructure since British colonial rule was lifted in 1956, there is a clear opportunity for the new state to learn from the numerous experiences of other countries in the region, and especially to avoid repeating the mistakes of North Sudan.

The Challenge:

The establishment of a new state, which previously received only minimal infrastructural support from the North, which repeatedly destroyed the South's infrastructure through repeated violence, presents a difficult challenge for instituting even the rudimentary self-sufficient structures of a state. The NCP and previous governments centered in the North have a clear record of gradual deregulation of critical services such as education and health care provision, especially to rural areas in South Sudan. In the early 90s, the NCP's macroeconomic reforms exceeded even the radical privatization measures expected under the Structural Adjustment Programs (SAP) of the International Monetary Fund (IMF). The SAP's curtailment of public funding for core social services such as health care produced the private health care systems we see in most, if not all, African countries today. However, the NCP members exacerbated these measures through “liberalization policies” which almost completely ameliorated public funding of the salaries of health care workers, rural primary care centers and medical schools. Hence, it effectively turned all these responsibilities into private enterprises for the profit of a few corrupt officials. This period saw a clear deterioration in health

care provision throughout the country. However, the effects were felt more strongly in the South in the second phase of the civil war which lasted from 1983 and 2005. In this period, an estimated two million civilians died and at least 4.5 million were displaced either to the North or to neighboring countries such as Kenya and Ethiopia.

Currently, South Sudan faces one of the most dependent public health care situations in the world. South Sudan has an acute shortage of skilled health care workers with availability of access estimated at one physician for every 100,000 civilians. Furthermore, the country has the highest maternal mortality rate globally with 2054 maternal deaths per 100,000 live childbirths. Many diseases endemic to South Sudan such as malaria and guinea worm infection have already been eradicated in other countries. Consequently, the non-governmental organization (NGO) sector has been effectively replacing the role of the Ministry of Health by providing immunizations, anti-retrovirals for HIV/AIDS, and antibiotics for tuberculosis. However, repeated interruptions of NGO health care provision due to war led to a high rate of unplanned patient non-compliance with treatment regimens. For instance, Médecins Sans Frontières (MSF) workers were evacuated at least seven times in two and a half years from the region of Lankien during the civil war. Furthermore, the inadequacy of medical training in South Sudan poses a problem of continued dependence on international NGOs to provide care for citizens in spite of their intermittent presence in the region. This has translated into a high spread of drug resistant HIV and tuberculosis strains, making current intervention a public health nightmare. These problems are compounded by the lack of clean running water and sewage systems, even in the country's developed capital; Juba.

In addition to the inefficient governance in Sudan before the cessation of hostilities, which centralized services at the expense of rural areas in the country, Northern Sudanese people continued to hold extremely racist views against people of the South. Many Southerners worked as domestic servants and were clearly discriminated against in the educational and vocational employment spheres. These views date back to earlier attempts by the Ottoman Empire to convert the people of southern Sudan to Islam. The discrimination became more entrenched in law in post-colonial Sudan in 1983 when then-president Nimeiri decided to establish Shari'a law which effectively discriminated against the people of the South as the majority of

them were either Christians or followed traditional religions.

Within the South itself, many inter-tribal conflicts over power continued to occur after separation from the North creating new internal violence. Additionally, many of the areas within the disputed border between the North and South, such as Abyei and South Kordofan, have suffered repeated militia attacks from the NCP which has destabilized the self-determination of the region. These ongoing factors, combined with the economic ramifications of a long history of war and centralized governance, led to a continuation of the historical prejudice and exacerbated poverty and suffering, culminating today in a newly born country which faces daunting challenges to real self-sufficiency.

The Opportunity:

The history of South Sudan and its gloomy public health reality make the challenge of establishing an effective health care system difficult. Nonetheless, the genesis of this new state may actually provide an opportunity for the creation of an efficient system which differs from the privatized and elitist system of health-care provision in the North. South Sudan has the advantage of being debt-free with 38 billion dollars of debt transferred to the North as a stipulation of the CPA. This will have the dual benefit of maintaining the country's resources for the sole purpose of funding the state instead of being allocated for debt repayment, and it also removes the influence of international agencies such as the World Bank and International Monetary Fund (IMF) from manipulating economic policy. Economically, the oil resources of the South can help to establish the necessary infrastructure for funding social services more effectively than the NCP did.

The country can also learn from other countries in the global south such as Cuba which successfully emerged from extreme socio-economic inequality to establish arguably the most efficient health care system in the world. The endemic diseases of Cuba before the Cuban revolution resemble those of South Sudan today but Cuba has provided a positive example of how to efficiently eradicate and effectively control the spread of many of these diseases. Furthermore, there is an opportunity to partner with countries like Cuba which is committed to South-South solidarity by providing free training for skilled health care providers and deploying medical brigades to impoverished countries to assist in their development.

The memory of the repeated violence in the region

may actually instill a higher sense of commitment and political will in South Sudan to meet its challenges. The late John Garang, founder and historical leader of the SPLM, envisioned a united Sudan which invested in rural planning and development; an area that was clearly neglected throughout Sudanese history. Many of his followers in the South remain committed to this vision of solidarity and equality between the different ethnic groups and regions of the South.

In summary, South Sudan's emergence from a deadly civil war also presents the difficult challenge of bringing a sense of dignity and equity to its citizens through effective development policies and social services. Although the country is far from attaining the health care standards recommended by bodies such as the World Health Organization (WHO), it has many other ingredients for making these standards an attainable goal in time. Neighboring countries and the global north have a clear role to play in standing in solidarity with people of South Sudan; however, they must do so without disempowering its citizens from the rights for which they have been fighting for decades. The road may be long, but with genuine political will the people of South Sudan may impress us all with their achievements.

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Vital Discussions on Human Security

A lecture series co-sponsored by University College Health Studies Programme, Canadian Pugwash Group, Science for Peace, and Voice of Women for Peace.

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Climate Politics at the Crossroads

Jacqueline Medalye

Introduction

For nearly 20 years the United Nations Framework Convention on Climate Change has been the international body responsible for addressing the global problem of climate change. In 1990, the UN General Assembly passed a resolution formally launching negotiations towards an international climate change agreement and, on May 9, 1992, the United Nations Framework Convention on Climate Change (UNFCCC) was adopted (IPIECA, 2008: 2). Currently, the Convention has been signed by 191 nations. Historically, the United Nations has been the highest decision making body that nations turn to in order to come to an agreement on how to reduce global greenhouse gas (GHG) emissions. At the core of the UNFCCC process is the ideal of international cooperation and democratic pluralism leading to collective action to solve the problem of climate change. The UNFCCC represents and forwards the widely held belief that cooperation among interested parties, including states, corporations, and civil society, can result in policies to resolve global warming. The annual Conference of the Parties (COP) serves as a space for nations to evaluate, negotiate, and improve their commitments within the Convention.

However, for several years now, the UNFCCC and its annual COP have come under severe criticism. First of all, the on-going political negotiations of the UNFCCC have not moved the world closer to resolving the problem of climate change despite growing scientific evidence of the serious risks to ecosystems and society. In fact, since the beginning of the Convention, the mean global concentration of CO₂ has actually increased from 356.27 ppm in 1992 to 389.78 ppm in 2010 (Mauna Loa Observatory), calling into question the capacity of the UNFCCC and the Kyoto Protocol to actually curb and reduce emissions. Secondly, the Conference of the Parties 15 (COP15) in Copenhagen was a turning point in the legitimacy of the UNFCCC insofar as the façade of democratic pluralism (which its legitimacy relies upon) was officially shredded. Over 30,000 official delegates were locked out of the COP15 negotiations and found themselves confronted by police brutality while the Copenhagen Accord was put forward by a handful of states without the support

of the G77. The failure of leading industrial nations to be inclusive or deliberative in the face of a major threat to the survival of the human race led many experts and observers to concede that the UNFCCC process is unlikely to provide any meaningful action on curbing GHG emissions. Thirdly, in the last round of negotiations at COP16 in Cancún, the international community agreed to maintain a global temperature rise of 2C, while suggesting that the controversial Carbon Capture and Storage and REDD+ (reduced emissions through decreased deforestation) schemes should form a new market-based solution to curbing emissions, while also putting forward a new Green Fund for mitigation and adaptation actions for developing countries. Despite the UNFCCC's rush to promote these decisions as "progress", Cancún failed to fulfill the central purpose of the UNFCCC which is to establish a legally binding commitment to reduce emissions between countries.

Civil Society and the UNFCCC

From a political perspective, one of the most alarming features of the UNFCCC currently has been its re-configured relationship to civil society which began in 2009. At COP15, 45,000 official delegates arrived at the conference to participate as official invited observers. This historical turnout proved to be a serious challenge for the United Nations. Logistically, the conference site could hold only 15,000 people, leaving 30,000 delegates stranded outside for days on end. Outraged over their exclusion, NGO delegates protested and joined a climate justice street march. The protestors were confronted with 9,000 police officers who used brutality and arbitrary arrest to dissipate the peaceful march. Amid the chaos, the president of the UNFCCC resigned and the UNFCCC unilaterally decided to formally lock out all 15,000 NGO delegates from COP15 leaving decisions to the state and corporate delegates who were locked behind closed doors. Thousands of invited participants were officially blocked from the multilateral climate process, marking the end of open NGO participation within the UNFCCC.

Reviewing the situation, the UNFCCC realized that civil society was willing to mobilize in large numbers to express its discontent with the UNFCCC process and the failure of democratically elected governments to represent the concerns of citizens. In order to reclaim its legitimacy at COP16 in Cancún, the UNFCCC made a number of strategic manoeuvres. In the first place, the conference was relocated to the Yucatan Peninsula, far away from major population centers.

Cancún provided a strategic spatial fix for the UNFCCC insofar as the protests that did inevitably occur in Mexico City had no key location upon which to converge. Secondly, for the first time in its history, the UNFCCC decided to physically separate official NGOs and non-delegate civil society from the negotiation space of the conference. Overall, the conference zone was so large that it would have taken seven hours to traverse the entire zone by foot and just over two hours to traverse the zone by car or bus, a calculation that does not include the delays caused by military checkpoints along the way. In contrast, in Copenhagen the conference was located in one space and was easily accessible by anyone via public transit. The manoeuvre in Cancún effectively erased all civil society from the space of the official negotiations. Finally, the choice of Cancún also afforded UNFCCC COP16 delegates the opportunity to attend the conference in an idyllic location offering the eco-vacation of a lifetime. To this end, Cancún was transformed into an environmental fantasyland where delegates, who were secured accommodations in all inclusive "eco-resorts", could purchase carbon offsets to ensure their flight to the COP was carbon neutral, wake up to the sounds of pre-recorded birds singing in a transplanted "conservation" forest, gorge on all-you-can-eat daily vegan, and "get back to nature" in their downtime by taking various eco-trips into artificial conservation areas along the peninsula. These actions on the part of the UNFCCC served to re-legitimate the organization in the eyes of delegates, and set forward a new precedent to physically remove civil society from the spaces of power in international climate politics.

The Road to Durban COP17

COP17 will take place in Durban from November 28–December 9 2011. As we approach the eve of another COP, what can we expect in light of the UNFCCC's recent history and the outcomes of the interim talks in Bonn since Cancún? In a nutshell, we can expect to witness the end of the Kyoto Protocol with no new legally binding commitments to reduce greenhouse gas emissions to replace it. The failure of the interim negotiations in Bonn last June to produce a draft for negotiation in Durban is a telling sign that the international process to reduce emissions via a legal agreement is unlikely to move forward in the near term, and instead we should expect to see international efforts diverted towards financing and establishing the basis, implementation, and details of the \$100 billion per year Green Fund for developing countries by 2020.

But, the Green Fund, in the absence of new legally-binding emission reduction targets, will act to divert attention away from the main emitters of GHGs. Instead, the international community's attention will be placed on technology transfers to the South rather than on substantive cuts for the world's major emitters, establishing the legally controversial REDD+ scheme, and encouraging new forms of experimental adaptation finance – none of which will achieve the immediate and pressing goals of reducing global GHG emissions to curb catastrophic climate change. Patrick Bond, has described the situation poignantly: “What everyone now predicts is a conference of paralysis. Not only will the Kyoto Protocol be allowed to expire at the end of its first commitment period (2012). Far worse, Durban will primarily be a conference of profiteers, as carbon trading – the privatization of the air, giving rich states and companies the property-right to pollute – is cemented as the foundation of the next decade's global climate malgovernance” (Bond, 2011: 1). This is evident as the UNFCCC recently called for a “quantum leap” in private sector involvement in investment to combat climate change this September (Chestney and Twidale, 2011). The power of corporate interests in the negotiations has been a prominent feature of the UNFCCC since the implementation of the Kyoto Protocol, and the force of market interests is evident in the push forward towards REDD+. Moreover, some elements of civil society appear to be shifting, with Greenpeace announcing a change in its strategic focus, choosing to focus less on the UNFCCC negotiations and more on action against industrial polluters and corporations. To date, the activities of civil society and the climate justice movement for mobilizing action at COP17 appear fragmented, and although it is difficult to predict the future, the location of COP17 in the wealthy guarded neighbourhoods of Durban raises questions regarding the capacity of civil society to adequately impact the process through traditional forms of protest and mass mobilization. In all likelihood, political activism at COP17 is likely to remain outside of the purview of the negotiators and power, as a market-based agenda is pushed forward and entrenched deeper into the UNFCCC and its various non-binding agreements.

Developing a Radical Climate Politics

Currently, it appears that previous modes of pressure by civil society have not been able to stop the UNFCCC from putting forward market-based solutions to climate change that privilege economic and

corporate interests. Calls for a fair and just climate deal have fallen on deaf ears for nearly two decades, with no change in sight. Moreover, we find ourselves at a moment where the summer Arctic ice extent has reached a record low, where East Africa is experiencing its worst drought in 60 years, and where Texas has had the worst wildfires in its history. Yet, these trends, which should alarm all of us to the potential devastating consequence of climate change for humans and nature, have been met with further equivocation by the corporate state and the power elite who claim that the market can solve this unprecedented environmental problem, and even that climate change will bring new unforeseen benefits and an age of “climate prosperity” (NRTEE, 2010).

Sheldon Wolin would explain these politics as shaped by the inverted totalitarianism that has been normalized in US and international politics. Unlike classic totalitarianism, where a powerful state dominates the economy, in inverted totalitarianism corporations and the economic imperatives dominate the state. According to Chris Hedges, climate change is inseparable from inverted totalitarianism, and the failure of the liberal class who have placed their hopes in the climate negotiations is that it “sought consensus and was obedient when it should have fought back. (It) continues to trumpet a childish faith in human progress....the naive belief that technology will save us from ourselves. The liberal class assumed that by working with corporate power, it could mitigate the worst excesses of capitalism and environmental degradation. It did not grasp, perhaps because liberals do not read enough Marx, the revolutionary and self-destructive nature of unfettered capitalism” (Stryker, 2010 quoting Hedges, 2010).

We have failed as a society to address the problem of climate change through our existing political mechanisms and economic structure. For example, the current Canadian government's tendency to privilege corporate and economic interests at the climate negotiations and its continued support of the Tar Sands is exemplary of the inverted totalitarianism under which we now live. The clear directive of the Harper government to ignore the overwhelming majority of Canadian voices (65%) that believe the government should take action on climate change at home (CBC, 2011), and by extension, the inaction of our government at the UNFCCC negotiations, suggests that we should seriously re-evaluate what citizens can accomplish through protest or representative politics. Notwithstanding a major change in government direction after

the next election, it may be time to reconsider the shape that climate politics ought to take. It may be time to put aside our hopes that the UNFCCC and negotiations among the power elite can solve the problem. Instead, we should consider preparing for the changes to come as our governments, institutions, and economic structures fail to take the actions necessary to halt climate change. A radical politics of climate change will not be found in a protest march barricaded by police on the outskirts of a dying UNFCCC negotiation in Durban. Radical action on climate change will happen in our communities and among us. At the most basic level, this will include building communities that do not depend on oil for the basis of their survival, a move towards self-sufficient self-governing sustainable democratic communities capable of providing for their material needs outside of capitalist social relations, developing the capacity to grow food outside of the agro-industrial complex, developing economically democratic systems for production, reclaiming the commons that are fundamental to human survival, and above all a fundamental change in consciousness where the human domination of nature, the human domination of other humans, and the human domination of the self no longer forms the basis of our social relations.

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