

## **Nuclear Weapons Free Zones, Canada and Disarmament**

Memorial Lecture for Dr. Eric Fawcett to Canadian Pugwash and Science for Peace, Oct. 1, 2005

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When Metta Spencer asked me to speak at an event honouring the memory of Eric Fawcett, I was quite touched. What struck me most about Eric was that he was a man with a wonderful ability to reach out to other people. I experienced this facility in two ways, firstly, in the initiative he took in arranging collaborative events between my organization, Canadian Physicians for Global Survival (CGPS) and his, Science for Peace. This particularly centered on a lecture series Eric organized at University College here at the University of Toronto. Secondly in the thoughtful and probing but always respectful questions he asked about my discipline, psychiatry. So I should let you know that there will be some psychiatry ahead. But not to worry, the beauty of psychiatry, as I'm sure you're well aware, is that it goes with everything.

Nuclear Weapon-Free Zones (NWFZs) is actually not area I have researched in, so I wanted to thank Sarah Esterbrook of Ploughshares, Phyllis Creighton and Derek Paul of Science for Peace and, in abstentia, Debbie Grisdale of CPGS for their help in preparing this talk.

The four fundamental features of NWFZs are regional agreements to forgo the manufacture, acquisition, testing and possession of nuclear weapons. The existing treaties, as well, have related protocols with the nuclear-weapon States (NWSs) regarding negative security assurances, i.e. we promise not to blow you up, and not to transport nuclear weapons and related materials through the territories of declared zones. In practice, the NWSs have found ways to dilute these protocols through various exemptions.

There are three NWFZ treaties in force and two other treaties that have been negotiated but not entered into force. The three treaties, and I won't attempt to mispronounce their names, are in the Latin American region, completed in 1967, the South Pacific, completed in 1985, and the South East region, completed in 1995. The other two treaties that have not yet entered into force concern the African continent and the Central Asia region, made up of five countries of the former Soviet Union.

Support for the concept of NWFZs is enshrined in Article VII of the 1970 NonProliferation Treaty (NPT) and endorsed by a resolution of the UN general assembly in 1975 that outlined specific criteria for these zones.

Each of the regions, of course, has had specific local motivations for creating NWFZs. In Latin America it was the 1962 Cuban missile crisis, in the South Pacific it was French nuclear testing, in the Southeast Asia it was the desire for negative security reassurances from proximate China and in Africa it was initially French testing in Algeria and later nuclear weapons development in South Africa.

Today there are 113 nations belonging to these zones, this is half of the earth's land area and almost the entirety of the land area of the southern hemisphere.

In April of this year the first ever international conference of the NWFZ countries was convened in Mexico. Its timing was deliberately based in an effort to leverage its moral authority in an attempt to influence the outcome of the upcoming NPT review this past May.

Amongst the many statements issued in the concluding declaration of the conference, I will cite a number of note. The declaration calls for immediate global nuclear disarmament, citing Article VI of the NPT and, in particular referencing its concern about Bush's strategic nuclear doctrine. It calls for ratification of the African treaty, urges India and Pakistan to accede to the NPT and create a South Asia zone, it expresses support for the Central Asia treaty and urges the NWS to co-operate with this treaty and it calls for a NWFZ in the Middle East and urges Israel to join the NPT. Of note, there is a glaring omission of mention of the Korean peninsula. One might speculate why that is.

Turning to Canada - although we have not taken the opportunity to develop nuclear weapons of our own despite having the technological capability, we are very much intertwined in the nuclear weapons cycle. I will give you a few of the highlights.

Perhaps Canada's most hypocritical contradiction is our membership in NATO, a military alliance that includes first strike nuclear weapons amongst its arsenal. As well, we are partners with the U.S. in NORAD, the North American Aerospace Defence command. This warning system is an integral ingredient in the American nuclear weapons launch decision-making system. Although there have been no nuclear weapons stationed in Canada since 1984, there are believed to be classified agreements to station U.S. nuclear weapons and delivery systems in Canada in times of crisis. American navy nuclear-capable submarines transit Canadian waters and visit Canadian ports. NATO uses Canadian territory for low flight-testing of nuclear capable bombers and, with government support, Canadian industries produce components for nuclear-capable bombers and other nuclear-related systems.

Canada has a long history of wrestling with this question of our involvement with the nuclear weapons cycle. Most recently, we witnessed the debate over whether or not to participate in the American so-called Missile Defence plan, which the peace movement won, sort of, by a hair. However, even going back to 1963, Diefenbaker's minority government fell on a non-confidence motion related to whether or not Canada should accept American nuclear weapons on its soil.

The movement to make Canada a NWFZ reached its height in the 1980's. The strategy focused chiefly on the municipal and provincial levels of government. In particular, Vancouver and British Columbia were hotbeds of activism, spurred on by concerns about U.S. subs in west coast waters and torpedo testing in the Straits of Georgia. By the late 1980's, well over a hundred jurisdictions in Canada had declared themselves NWFZs. This, however, is more of symbolic than of practical importance. At a federal level, in 1987 the World Federalists led a legal action to the Federal Court to declare Canada a NWFZ. This, as we aware, came to naught.

Since that time, there has been little action on this front. For instance Ploughshares called for a 12-step programme to make Canada a NWFZ in 1995. Neither of these initiatives was met with significant involvement or interest. In terms of current activities, in researching this paper I have two personal communications. Bev Delong of Lawyers for Social Responsibility is preparing a paper which puts forward the legal case for Canada as a NWFZ and Judith Berlin of the Canadian Peace Alliance started a petition after her discussions with the Mexican Ambassador for Disarmament at the May NPT conference.

In addressing the theme of today's conference I would like to pose two questions that I believe are germane to our discussions. The first question is, can working for NWFZs, either here in Canada or elsewhere, become a fruitful strategy? The second question, which is much broader, is working for nuclear disarmament itself, in fact, a waste of time?

Regarding the first question, it is my opinion that NWFZs are at best a containment strategy. If you will allow a medical metaphor, they are akin to a patient with cancer where you prevent the spread of cancer but you fail to remove it. The question here, in terms of prognosis, is will the patient still die from his disease. I would say that the answer is very clear when it comes to nuclear weapons. There is more than enough disease already to kill us. There is more than enough nuclear weapons to destroy the earth many times over. Thus, in my opinion, the movement towards NWFZ here in Canada and elsewhere is useful, but only to a limited degree, and in an overarching context is inadequate to prevent a nuclear holocaust.

In regards to the second question, in working for nuclear disarmament I would like to say this. I have been working on this since I was a resident in psychiatry over 25 years ago, a quarter of a century. Efforts to eliminate nuclear weapons began with their inception over half a century ago. What do we have to show for all this work? What has actually been accomplished? If this were a clinical outcome study, I would have to say we are not doing very well. The disease, if anything, is spreading.

I would now like to offer a further medical metaphor to, firstly explain why we have done so poorly and, secondly, to suggest how we might succeed and save the patient, who is, after all ourselves.

I believe there is great utility in considering war through the framework of an addiction. I believe this is useful on two counts. Firstly the model of addiction as applied to war has some helpful explanatory power and secondly it forces us to reconsider our strategies.

The human brain contains its own evolutionary history. It exists solely for its own survival. Its purpose is no greater and no less. But it is an organ at odds with itself. Its attempt to survive appear to be its own undoing.

The human brain, in appearance, resembles a cauliflower. At its base, from an evolutionary perspective, is its oldest part, the brainstem, and its outer leaves the most recently evolved cortex. In between both anatomically and in terms of evolutionary age, is the midbrain.

The brain is a vastly complex organ with billions of cells that communicate through a hundred different neurotransmitters, the chemical messengers that travel between charged nerves. Each of these parts speaks continuously to the others. Like the layered seams of the earth, they reveal the path of human evolution as it emerged from the sea and rose to walk upon the land.

Our rudimentary, reptilian brainstem keeps our hearts beating and our lungs breathing. Our cortex, amongst many other things, receives and processes new information. But the real action is in the midbrain. It is here our emotions and pre-programmed instincts reside. It is here our ravenous appetites for survival drive our behaviour.

We are born hungry, looking for our next meal. The cord is cut and we are placed to our mother's breast. So it goes – blood, milk, money. From the dictates of survival, anything that interrupts these thirsts must be destroyed.

Freud labelled two instincts, Eros and Thanatos, one of affiliation, the other of destruction. All human motivation can be reduced to two precepts – connection and competition. Both exist in the service of survival. But in the nuclear age, the latter has turned on itself. Destruction of the other has become destruction of the self. Thanatos. Competition as expressed in war has been rendered absurd. But our appetites won't relent. The midbrain wants what the midbrain wants.

Deep within this structure lies the ventral tegmental area. It connects up with the frontal cortex in the front of the brain to form the meso-limbic dopaminergic pathway. The word meso-limbic means that this pathway of nerves is part of the limbic system, the main structural and functional system of the midbrain. The word dopaminergic is derived from dopamine, the neurotransmitter that is released by the nerves of this pathway.

The meso-limbic dopaminergic pathway is part of the brain's self-reinforcement system. The brain experiences the release of dopamine as exciting and pleasurable and is therefore driven instinctually to directing our behaviour in ways that maximize the firing of these cells. These behaviours include sexual pursuit and aggression. Connection and competition. Eros and Thanatos. Sex and violence. Love and Death.

Thus the brain has evolved in such a way that it reinforces those behaviours that have allowed it to survive with the sensation of pleasure; that is, survival behaviour has led to pleasure and pleasure has maintained survival behaviour. Until now. Because the brain has also discovered ways to trick itself. One of the ways is through substances that when ingested, act directly upon the meso-limbic nerves to release dopamine and create the experience of pleasure – drugs. The other is war.

The Creationists are insulted by the idea that we are primates. But the evidence is there for all to see. In a police line-up with say a turtle, a zebra, and an ape, it's not hard to pick out who our cousin is. It is this illusion of exceptionalism, of being special, whether as a species or a group, which is at the root of the denial and rationalizations of war.

Our closest cousin, the chimpanzee shares 99% of the same DNA as we do. Chimpanzees hunt in groups of males who attack and kill not just prey but other chimps that intrude on their perceived territory. Like human societies, they are instinctually male dominated, with the submissive females attracted to the more aggressive males. It is out of this species that our species, *Homo sapiens*, evolved two million years ago. Thus our midbrains are pre-programmed for the same behaviour.

Early human societies are referred to by the anthropologists as hunter-gatherers, males being the hunters of meat and females being the gatherers of berries. Males learnt to hunt in groups, precursor to the sports team and the platoon, to hunt the larger animals of other species. And like their cousins, the chimpanzees, humans also hunted each other. The thrill of the kill, whether a brutal check in hockey or bombs over Baghdad, has always been with us humans, firing the nerves of the limbic system in our midbrains to release dopamine. Natural selection has shaped our species in this way. The winning warriors survived to pass on their genes, the losers didn't. Until now.

Evolution can be broken down into two facets – genetic and cultural. Genetic refers to the physical manifestations of the brain, cultural to the things it produces. The physical changes in the human brain plateaued around a quarter of a million years ago. On the other hand, cultural evolution has grown exponentially. From a survival advantage, these developments have created an equi-potential.

Cultural evolution has led to humans living together in increasingly larger and more complex societies. It has also led to the hypertrophy of man's most favourite tool, the weapon. Hypertrophy is a term coined by Edward O. Wilson, the eminent scientist and noted Humanist who is the father of the discipline of sociobiology, the study of the biological basis of social behaviour. Hypertrophy refers to the exaggerated evolutionary growth of pre-existing structures, some examples being the lengthening of elephant teeth into enormous tusks or the sprouting of the cranial bones of the male elk into great, branching antlers. Human weapons have hypertrophied from found stones to nuclear bombs. Instead of offering survival advantage for some, they now threaten exactly the opposite for all. The concept of hypertrophy, like addiction, rests on the assumption, that at times, you can have too much of a good thing.

The treatment of addiction must start, of necessity, with the confrontation of denial, admitting that there is a problem in the first place. No other institutions exemplify and perpetuate the underlying assumptions of exceptionalism more than national armies and military alliances. Too sheepish in this modern age for the now antiquated term, Ministry of War, they are now euphemistically referred to as the Department of Defence. One might ask, however, if no country has a Department of Offence, why do all of us require a Department of Defence? The midbrain is such that there may not always be enough work for one army but there will always be plenty for two.

The last half of the past century, as we all know, has been filled with interminable disarmament talks. They have, however, failed to stem the tide of armaments, which are the drugs of war. They are not holding the beast at bay. If anything, we are witnessing the unravelling of this fragile edifice, as exemplified by the recent fraying of the Anti-Ballistic

Missile and Non-Proliferation treaties. Disarmament cannot hold against the powerful competitive pulls of armies and alliances. We will not have a significant and sustained reduction in arms until we develop a reliable system of international law enforcement.

Thus what I am suggesting is that working for nuclear disarmament, whether through NWFZs or the Middle Powers Initiative or whatever, is a necessary but insufficient condition to achieve our aims, which are, modestly, to save the world. It is akin to the so-called war on drugs where you attempt to cut off the supply of drugs but fail to deal with why there is such an appetite for them in the first place, where you have sniffing dogs but fail to look at the bankruptcy of your culture.

I believe we must have a 2-pronged approach. That is, working for disarmament but also, in equal measure, working for international governance. I believe that in order to be successful as a Peace movement we must, in large part, be a Police movement. We must address not only the supply side of this addiction but also its demand side. I believe that failure to confront both parts of this equation, to confront both facets of this addiction, will mean absolute failure.

There is, however, I believe reason for optimism. I would cite the formative but expanding role of peacemaking and peacekeeping in the United Nations and, in particular, I would sight the efforts of our former minister of External Affairs, Lloyd Axworthy. Axworthy's concept of human security and his related work in initiating the Commission on the Responsibility to Protect, which was endorsed in principle at the recent UN summit, represent an embryonic but vital development, a development that suggests that we maybe evolving to a new level of social organization – a global society, not one driven by the vigilantism of armies and alliances, but a society regulated by policing under due process of international law, a society in which the illusion of exceptionalism is shattered, a society whose resources are directed at its care and not at its destruction, and, ultimately, a society in which the addiction to war is finally cured.