

DO NO HARM: TOWARDS A HIPPOCRATIC STANDARD FOR INTERNATIONAL CIVILIZATION

Neil Arya

ABSTRACT

Recent threats to the state sovereignty system may be symptomatic of an underlying malaise in World Order with the current dominant 'Realist' model failing to live up to its promise. A new model based on principles from the realm of medicine is proposed. Beginning from a sound ethical base, this would redefine the primary role of government as being that of health promoters. In the domain of international affairs it would see governments approaching problems through the public health lens of Primary, Secondary and Tertiary prevention. When considering the need for an intervention, that would violate the autonomy of a 'patient' state which failed to look after the health of its citizens, the guiding principles of *Responsibility to Protect* seem to reflect sound medical practice and ethics. The example of US difficulties in Iraq is used to illustrate how this health model might have helped with diagnosis, assessing prognosis and determining a more effective treatment plan.

1 INTRODUCTION

We live in an age of insecurity and of fear. While the role of the modern nation state has been expanded beyond dealing with territorial security to providing such diverse services as health care, education, social welfare, environmental and resource management, in function, it seems incapable of even addressing the challenges to physical security and territoriality for which it was designed under the Treaty of Westphalia.

For a non-specialist practising family physician, current concepts of state sovereignty seems outdated, paralleling medical thinking of a couple of hundred years ago. In medicine, we have largely resolved such analogous questions of individual sovereignty as: How far do we respect a patient's autonomy? How do we deal with self-destructive behaviour or urgent surgery? How do we deal with minors who are unable to truly consent? How do we manage parents who are abusive or may not have the child's interest at heart? We also take a more positive

approach looking at prevention and health promotion and try to view the patient holistically.

In the domain of health, peoples are leaving behind the values of state protectionism, dominance, acquisition and expansion and managing to get together to deal with deadly global menaces such as AIDS, SARS and avian influenza. When practiced ideally, we use a combination of early and rapid detection, reliable data collection and developments of standards of treatment or care, sometimes quick reaction, at others isolation, quarantine or universal immunization, each of which requires substantial international cooperation and trust. Globally, this is what has allowed us to eradicate smallpox.

In reference to the nuclear age, Albert Einstein stated, “The splitting of the atom has changed everything except the way we think. Thus we drift toward unparalleled catastrophe. We shall require a substantially new manner of thinking if mankind is to survive”[1]. In this new era of fear, the paradigms under which we in the health sector operate may be useful as we look at concepts of sovereignty, security and state responsibility.

This paper is meant to show a new way of thinking for those in traditional field of international affairs with lessons from the realm of medicine and public health, but also will include some aspects of environmental studies, human rights and peace studies, with which I am most familiar. I will suggest that the failure of the current international order is the failure of the state system to adequately manage the health needs of the global population and finally propose a New Social Contract where the states responsibility is to the health and well being of its citizens, not just military security.

2. ALTERNATE GUIDING PRINCIPLES-MEDICAL ETHICS

Prevention and healing on a global scale require clear ethical principles for action, just as they do in the personal practice of medicine. On which principles might we build this alternative health-based security? Here are some building blocks in terms of respecting individual and group sovereignty and rights.

Medical Ethics

The first rule of medicine is *Primum Non Nocere* –first of all, do no harm. Doctors may sometimes have to jeopardise the health of their patients by their actions, but when there are significant risks, the

chances that we will benefit patients must be substantially higher than we will harm them.

Hippocratic Oath (400 BC)

The Hippocratic Oath [2], written when the Greek father of medicine was 60 years old, forms the basis of medical ethics today. Its primary tenets include the concepts of Beneficence and Non Maleficence.

“I will follow the system of regimen which according to my ability and judgement I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous.” “In whatever houses I shall enter benefit of sick and abstain from voluntary acts of mischief and further from the seduction”

Further Hippocrates proscribed action where one did not have proper expertise or the Right skills.

“I will not cut persons labouring under the stone but will leave this to be done by men who are practitioners of this work.”

Right authority

Thomas Percival expanded on Hippocrates’ ideas of service to patients, publishing a code of medical ethics for physicians in 1794 based in part on principles of gentlemanly honour. The American Medical Association’s Code of Ethics, adapted from Percival, became the first code of ethics or standards of behaviour to be adopted by a professional organisation. Physicians were finally held to account by a standard of their peers. In most countries, physicians have become self-regulating based on such principles.

Experimentation, Autonomy and Consent

Under the guise of scientific research, German doctors, including the infamous Josef Mengele, engaged in medical experimentation in Nazi concentration camps, using and discarding prisoners at will. The resulting trial of 23 Nazi doctors at Nuremberg for crimes against humanity helped give rise to the Nuremberg Code (1947)[3] outlining the ethics of medical research and ensuring the rights of human subjects.

Forty years of notorious experimentation in Tuskegee, where US prisoners, often less educated and African American, were denied standard treatment for syphilis, finally ended when information finally

came to light in the 1970s. This led to further refinement of the concept of consent. It must be entirely voluntary and given by a fully autonomous individual. There must be full disclosure; consent cannot be manufactured with deceptive or secret information; if it turns out that the patient does not agree with our recommendation, we have no mandate to defy the patient's wishes. We are not allowed to lie, mislead or withhold information (as for example in the case of terminal illness) for 'her/his own good'. This may have been considered acceptable at one time in many cultures, but is now considered paternalistic.

Investigators must be scientifically qualified. There must be avoidance of, and protection from, injury, allowing no unnecessary physical and mental suffering; the subject may terminate the experiment at any time. Extreme caution needs to be exercised with new therapies.

Informed Consent and Incapacitance

This consent applies, not only to situations of experimentation, but in the real world each any medical decision. We must give all relevant details to patients so that they can make their own decision about our proposed interventions. We are not expected to have a crystal ball, but to define risk in a forthright, unbiased and compassionate way.

Though some patients may make decisions which do not seem medically wise, in the longer term patients are more likely to accept the consequences of their decisions. The trust we earn from operating within these ethical boundaries increase our long-term credibility. In such an environment, patients often entrust us with making such decisions when they feel that we have expertise. In an emergent situation or prior to surgery, the patient may give a blanket consent to deal with the unforeseen.

The only exception to autonomy is when a patient, cannot be considered autonomous (as in a child when the parent makes decisions) or is incapable of making a decision due to mental handicap (when a substitute decision-maker is found). When a patient's guardian fails to protect its health, as in child abuse or denial of their basic health needs, society can step in through the courts, to protect the child.

Principles of Medical Ethics impacting on Sovereignty

Beneficence Primacy of Patient Welfare Altruism
Non Maleficence

Primum non Nocere
Reasonable Prospects for Success
Right Authority
Autonomy Confidentiality
Informed Voluntary Consent, Full disclosure
Incapacitance

3. GETTING THE DIAGNOSIS RIGHT

In Medicine, before we attempt to treat we feel that we must at least get the diagnosis right. We take a good history, looking at antecedents, risk factors, family history, social history, cultural background and values as well as looking at the current problem and its effects.

In international affairs, the field of Peace Studies has advanced the field of diagnosis considerably. Conflict analysis examines the general nature of conflict (the different levels and types of conflict); the parties involved in a particular conflict directly and indirectly, the causes and motivating forces of a conflict including stated and un-stated goals; the history of conflict (how it begins, develops and when it turns violent, what the natural course of conflict is), what forces keep it going, relationships between the players, their goals, and previous attempts to resolve the conflict. At a very basic level we must know the whos, whats, whys, and hows?

Any conflict may be manifest or latent. Resource conflicts are conflicts about territory or other valuable resources, whether natural, economic, political or social. Values conflicts arise from incompatible views, visions or norms sometimes based on perceptual and cognitive distortions. Further one would be interested in social, economic, political, geographic and military resources available to the conflicting parties, which would help determine power and power differentials. As such, to fully understand complex, large scale conflicts may require the knowledge and insights of many different disciplines- history, religious studies, political science, military strategy, geography, sociology, anthropology and psychology. [4]

Good physicians must listen, appreciate, empathise and learn from our patients. Often those central to a conflict provide the basis for much more creative, relevant and sustainable solutions than those who seek to provide them from the outside. Diagnosis and action should always be at a local level involving local players and experts at any stage of conflict.

4. HEALTH PROMOTION

Ethical principles provide some of the foundations of action for government. Others might be found in the field of health promotion. To make this assignment the primary task of government may appear like a radical step. However if we wish to think ultimately about why human beings give up their autonomy, it is to safeguard a better life or, in other terms, health and well being.

In the World Health Organization's (WHO) Alma Ata Declaration [5] of 1978, health is described, not just narrowly in a curative or symptom relief manner, but in a holistic way as 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.

[Health] is a fundamental human right and the attainment of the highest possible level of health is a most important world-wide social goal whose realisation requires the action of many other social and economic sectors in addition to the health sector'

The landmark Ottawa Charter for Health Promotion [6] similarly seeks a transformation in the way health is perceived, defining health as a resource, and considering the fundamental conditions to provide a 'secure foundation' for health to be 'peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity'. The Charter adds that 'political, economic, social, cultural, environmental, behavioural and biological factors can all favour health or be harmful to it'. Health promotion is defined as

'the process of enabling people to increase control over, and to improve, their health', and its actions 'aim at making these conditions favourable through advocacy for health' to be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment.

The above roles have largely been those taken over by the modern nation state. To look at health promotion of their populations in thus broader context as the responsibility of states would radically change their perceived role in the social contract accepted by many political theorists.

Fundamental Conditions for Health (to be promoted by states)

Peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity'

5. APPLYING A DISEASE PREVENTION MODEL OF PUBLIC HEALTH TO CONFLICTS AND THREATS TO NATION STATES

Once we arrive at a proper diagnosis we can then look at treatment. In Public Health, we look at preventing disease at various phases. Conventional understanding in international affairs only seems capable of examining prevention immediately before conflict and then at peacemaking, peacekeeping and peacebuilding. Yusuf et al. [7] go much further, describing how war may be viewed analogously, as a disease. As such, interventions during pre- major conflict, active conflict and post-conflict stages are explored, allowing preventive manoeuvres at the primordial, primary, secondary and tertiary stages. Threats to international body politic may also be viewed in this way and strategies to deal with these using the same model.

Primordial prevention involves looking at root causes, the underlying disease processes, not just proximate causes of death. It refers to what would normally be termed 'risk factors' for conflicts developing in the first place. Primary prevention concerns prevention of war from breaking out when a situation of conflict already exists, or from escalating to dangerous levels. Limitation of arms, combating propaganda and diplomacy are examples of such efforts. Secondary prevention refers to the situation where war has already broken out (the disease has manifested itself) and methods to make peace are sought (peacemaking and peacekeeping). Tertiary prevention, analogous to rehabilitation in medicine and ecological restoration for environmentalists, would be post 'hot' war peace-building.

Primordial Prevention

Though a health model has been used to describe prevention, the health care sector and public health themselves really have little to do with actually preventing global illness. Instead for primordial prevention it is civil society, education, social services and those who maintain civil infrastructure who will be the real global doctors.

'Root causes' might include human rights violations such as political exclusion, suppression of identity and lack of equity or land. Frances Stewart, [8] differentiates risk factors as group motivation (inter or intrastate resentments, divisions along cultural or religious lines, by

geography, or by class), private motivation (young uneducated men, with no alternatives: little income and no hope for gainful employment, may seek the opportunity to profiteer), failure of the social contract (with economic stagnation the state fails to deliver services and provides reasonable economic conditions -employment and incomes), and environmental degradation (eg. rising population pressure and falling agricultural productivity may lead to land disputes; growing scarcity of water).

The recent Arab Human Development Reports [9] give evidence to this. US ally Saudi Arabia, though wealthy, provided the majority of 9/11 hijackers. [10] Could it be that not supporting health and well-being has led to greater instability in the region and threat to the outside world? The first-order answer is poverty and lack of education: Almost half of Arabic-speaking women are illiterate. Few books are translated and little money is devoted to public health and education. Values of democracy have not been supported but instead autocratic regimes continue to be propped up to buy weapons from the West and to sell oil. The situation in superpower playing field of Afghanistan was far worse, allowing the rise of the Taliban. [11]

Economic system Soros investor and a philanthropist, sees major threats with allowing unbridled capitalism. In “Toward a Global Open Society” and “The Capitalist Threat” Soros argues,

“Global integration has brought tremendous benefits: the benefits of the international division of labor, which are so clearly proved by the theory of comparative advantage; dynamic benefits such as economies of scale and the rapid spread of innovations from one country to another ...and such equally important non-economic benefits as the freedom of choice associated with the international movement of goods, capital, and people, and the freedom of thought associated with the international movement of ideas. [12]

Although I have made a fortune in the financial markets, I now fear that the untrammelled intensification of laissez-faire capitalism and the spread of market values into all areas of life is endangering our open and democratic society. The main enemy of the open society, I believe, is no longer the communist but the capitalist threat. [13]

“Too much competition and too little cooperation can cause intolerable inequities and instability.”[14]

Failure to address environmental challenges may be a cause of war. The UN Intergovernmental Panel on Climate Change (1995) [15] has determined that unmitigated production of greenhouse gases would not only warm the global climate, but have various other consequences, direct and indirect, which would impact on conventional security and on human health and well being.

For example, the melting polar ice cap would increase sea level causing increasing flooding of low-lying areas, particularly in Third World countries which would not have the infrastructure to adapt. Much of Bangladesh and China is expected to be submerged with 140 million environmental refugees forced to migrate. According to the insurance industry [16] extreme weather events including El Ninos, heat waves, droughts, forest fires, but also winter storms and ice storms are increasing in number and severity as predicted by the Intergovernmental Panel. Migration of disease such as malaria, dengue fever, West Nile Virus, schistosomiasis, cholera outside of equatorial areas is also occurring. Food security will be compromised by each of these and reversal of global currents such as the Gulf stream as damaged fragile ecosystems have no time to react to such changes. The resultant social instability and possible violence would certainly be a threat to the state system. We have already seen the tsunami exacerbating some tensions as conflicting parties dispute aid allocation and obtain resources allowing the conflict to continue.

Operationalizing Primordial Prevention: Human Rights, Democracy and Economic Justice and the Biophysical Environment

The Universal Declaration of Human Rights was adopted and proclaimed by the General Assembly of the fledgling United Nation in the aftermath of the Second World War, [17] not by starry-eyed idealists but people who had recently witnessed the Nazi war of aggression, the Holocaust, the use of nuclear weapons and the greatest loss of life in human history.

These rights seem to correspond to the fundamental determinants of health cited by the Ottawa Charter and violation of these rights to the non-direct (structural, cultural and ecological violence) of peace studies pioneer, Johan Galtung. Providing these rights reduces grievances that lead to war. Such support may help meet other health needs. It should be noted that from a medical model, preventing these problems and

promoting health are fundamental ends in their own right; it is not just that respecting these rights reduces the chance of direct violence.

Amartya Sen, the Nobel Prize winning economist who found that independent and democratic countries with a relatively free press do not have famines,[18] also observed that liberal democracy and democratic values are not foreign to any culture.[19] Democratic development is rarely conferred by outsiders through war. Supporting human rights monitors, tribunals for violations of political, social, economic and religious freedoms and rewarding progress by allowing progressive reintegration of violators into the international community are ways of encouraging democracy. Democratic movements within countries and civil society opposition to dictatorship may be nurtured through non-violent regional and international non-governmental organizations.

Now nations are prioritizing health rights (eg. People's Health Charter [20]) and common Millennium Development Goals. [21] These goals include eradicating of extreme poverty and hunger, promoting debt relief, ensuring that all boys and girls complete a full course of primary schooling, promoting gender equality, reducing child mortality, improving maternal health, combating infectious diseases, ensuring environmental sustainability, providing safe drinking water, developing a global partnership for development and promoting good governance. The United Nations Development Programme (UNDP) has been entrusted with coordinating such global and national efforts but might benefit from investment of a small fraction of the \$900 billion dollars annually devoted to militaries.

As a Pentagon commissioned report [22] has recognised, addressing environmental threats to mitigate their effects makes sense both in terms of conventional as well as a health-based model of security.

Such long-term thinking (addressing democratic deficits, human rights, health, education and the environment) is not popular among many political or military leaders who define security narrowly. Remember the aphorism: "When I gave food to the poor, they called me a saint; when I asked why the poor had no food they called me a Communist"[23]. Unless we address challenges which impact the health and well being of the planet by searching for root causes rather than applying the scalpel or band-aid at first instance, the global system will continue to suffer.

Primary Prevention

Early reaction in regions of risk might be for example, by peace brigades under international authority. Strengthening efforts to manage conflict for example of The Organization of Security and Cooperation in Europe which had observers in Yugoslavia who seemed to have controlled any major direct violence or ethnic cleansing in Kosovo in the year prior to the 1999 war, could decrease nations resorting to wars with their economic, social and environmental impacts on health. Signs of disapprobation such as military, diplomatic and targeted sanctions (unlike those imposed on Iraq) each may contribute to pressures on states which violate international norms. Increased international control of money supply networks and border controls may be necessary, but must be balanced with respect for civil liberties, for creating resentment within or without our borders. While not as good as managing root causes in medicine, managing diseases in the early stages before the disease has major symptoms, in this case loss of life from war, is usually preferable to trying to stop actual war.

A second method of primary prevention is removing the means by which to wage war, the arms including the most devastating, nuclear arms.

Primary Prevention: The Question of Nuclear Arms

Perhaps the greatest threat for which hard power is considered essential by Realists are those of nuclear weapons and terrorism. The Realists extol the virtues of nuclear weapons which have create a fine balance. Deterrence is felt to be the best and possibly only strategy.

As I wrote in a response to a Time magazine article by Charles Krauthammer on deterrence,[24] when nations continue to try to balance one another, we have proliferation. For deterrence to truly work, the threat must be credible (ie. the country threatening must be capable of delivering, it must demonstrate a willingness to follow through, and such a threat must be communicated and believed). A nation must be simultaneously crazy and immoral, willing to commit genocide if attacked and rational enough to be deterred by the threat of the opposing side. As such, North Korea is practising deterrence in spades today.

Rather than seeing nuclear weapons as a major threat to US interests, the US has promoted them as a cornerstone of defence, obstinately refusing to rule out First Strikes including using small nuclear weapons in the war on Iraq even if Iraq never used weapons of mass destruction.

Russia and the US keep their weapons on alert status, targeted against each other, even when they are allies. The US, with overwhelming nuclear and non-nuclear superiority, has refused a Comprehensive Test Ban Treaty let alone concrete steps toward nuclear abolition as mandated by Article VI of the Nuclear Non-Proliferation Treaty that they try to get India and Pakistan to sign and Iran to honour. Instead it hopes to rely on bilateral or regional party talks to persuade other nations to not develop those weapons they consider essential for their own security.

Primary prevention from a medical point of view would involve removing the instruments of damage: reducing stockpiles, bans on fissile materials diminishing the opportunities for terrorists to acquire materials for suitcase, backpack dirty bombs, and alleviating the pressures behind the spread of nuclear weapons to unstable or even hostile powers.

To those who argue that the nuclear genie is too big to be put back in the bottle, the examples of such countries as Brazil, Argentina and Libya and earlier Canada, which gave up advanced nuclear programmes and South Africa and the Ukraine, which have given up actual weapons, provide an answer. The rationale for these decisions was varied-from financial incentives, protection under another's nuclear umbrella, a change of government with a different ideology or non-tangible rewards, integration and acceptance among neighbours and the international community. However with the active support (politically, economically, militarily and morally) rather than the opposition of the world's powers, in a world where nuclear weapons were as abhorred as landmines have become, who knows what is possible? In medicine we have managed to put smallpox back in the bottle.

Secondary Prevention: Mitigating the effects of war

In terms of reaction to war the international community must always weigh costs and benefit of action, inaction (or the status quo) or alternative action. Once again before deciding on action we might look at principles from Peace Studies.

Conflict may be defined as "a social interaction in which the participants believe that they have incompatible goals." It can be one of the most complex forms of human interaction, especially when it moves from the interpersonal to the international and from the short term to the long term. Conflict in itself is not negative but can be a stimulus for positive development and action.

Conflict resolution traditionally involves arbitration and adjudication or mediation with the possibility that one side wins and the other loses; one or both sides withdraw or the two sides compromise. Conflict Transformation is a process of enabling the conflict parties to handle the conflict peacefully 'involves systemic change, catalysing changes at deepest level of beliefs, assumptions and values as well as behaviour and structures'. [25] When parties enter into a creative process of collaborative problem-solving, of working through the conflict, at the end of which each gets what it wants, and possibly even more than it originally desired, this is called a "transcending" solution because it goes beyond, or transcends, what seemed possible before. "Reconciliation" is the term we use for the task of restoring social relationships to a state of sustainable peace. [26]

Conflict, even violent conflict and human rights abuses are likely to persist. What do we live with-which battles do we fight principles force as a last resort? We may need to develop capacity to triage priorities for action. Sometimes we have to choose the lesser of two evils but at other times we created threats supposedly to wipe out other menaces such as Bin Laden, Noriega and Saddam who boomerang on us.

Sometimes as medicine requires radical surgery, in international affairs, military action or credible threat of action necessary. When considered and employed, it must be used minimally, judicially, in accordance with universal values, where each action is considered a police action where the onus on them is the preservation of life, particularly of innocent civilians. Police sometimes do have to use measures which violate civil rights and endanger the innocent in pursuing terrorists in hot pursuit of criminals. However societies allow these to become too widespread, or is used to terrorise families, to deny the accused the right to a fair trial, to humiliate those accused in custody, to endanger their physical security or is done indiscriminately, then we risk losing our moral compass and running down a slippery slope where our values become not worth defending. How can we determine when hard power may be applied and sovereignty violated?

Secondary Prevention: Judiciously Expanding the Bounds of Intervention- The Responsibility to Protect-

The Responsibility to Protect, [27] was produced by the International Commission on Intervention and State Sovereignty, composed of former military, political and diplomatic leaders from around the world including former heads of states, international legal experts, NATO

generals and UN officials. Sponsored by the government of Canada and supported by many others, the document was intended to respond to the question posed by people in the West: with all of our military power: why did our governments and the UN fail to prevent genocides in for example, Rwanda and Sierra Leone? With current concepts of state sovereignty, could the international community have acted earlier in these cases or in those of Bosnia and Herzegovina, Kosovo or East Timor?

The international community is charged, not just with responsibility to react, but to prevent, and rebuild - "Prevention being the single most important dimension of the responsibility to protect". [28] These elements correspond very directly to preventive health care, curative treatment and rehabilitation, with a strong emphasis on prevention (primordial and primary).

While this model would therefore correspond to each of primary, secondary and tertiary prevention, it is the secondary prevention aspect that interests me here and it is indeed that which interested for example the British government as it looks at intervention by military means to prevent worse problems in the future. As with a minor, who cannot consent to treatment, but whose parents are not acting in her/his interest, it allows intervention without consent, greatly expanding in international law of criteria it offers under which a military response may be countenanced beyond self defence and explicit Security Council authorisation. However *Responsibility to Protect* creates a high bar for the launch of war to protect people, much as taking a minor out of the control of parents, is a last resort in cases of abuse, neglect or for provision of life threatening care as, for example, when parents refuse cancer treatment or blood transfusions.

These cautions, caveats and limitations of the ICISS Commission are reflected in 'Just War Theory' used to define rules of engagement in war but are startling in their parallels with the new health-based model described above. Instead of beginning with the question of intervention, the Report begins with the primary responsibility of the nation state: to protect all of its people. When the state is unwilling or unable to do so, then that responsibility falls to the international community. 'Patient' (or state) autonomy must only be overridden with proper safeguards and this must be done rarely. This appears analogous to a parental obligation to children and the obligation of society, and in particular the responsibility of health and social services professionals to intervene, when parents fail to act in the interests of a child.

A “Just Cause Threshold” must be present- serious and irreparable harm occurring to human beings, or imminently likely to occur. This would include large-scale loss of life or large scale ethnic cleansing, killing, forced expulsion, acts of terror or rape.

Much as physicians must have the right intention, (beneficence) holding the welfare of the patient above self-interest or goals of the state, the primary goal of the intervention must be the protection of the people, to halt or avert human suffering, not to secure of the interests of another state. There must be full disclosure of all intentions.

It must be under ‘right authority’ conforming to international law, the UN being the most appropriate body. Further it states that this would be “better assured with multilateral operations, clearly supported by regional opinion and the victims concerned.”[29]

There should be reasonable prospects of success in halting or averting the suffering which has justified the intervention, and as in medicine, ‘*primum non nocere*’ the consequences of action should not likely be worse than the consequences of inaction. The planned military intervention should be the minimum necessary to secure the defined human protection objective, and the means are to be proportional in scale, duration and intensity.

How do we determine when this threshold has been reached? Only after all non-military means have been exhausted, (these might include economic incentives, political and diplomatic measures, human rights observers, trade missions, cultural exchanges, and education, all to promote compliance and integration of the offending party) as a “last resort”, should the most radical and destructive measure, a military response be considered. In *A Duty to Prevent* [30] Anne Marie Slaughter and Lee Feinstein argue that these principles could be used to define actions on WMD preferably by the Security Council. Barry Buzan defines ‘failed states’ as those with high levels of political violence, a conspicuous role for political police in the everyday lives of citizens, major political conflict over what ideology will be used to organise the state, lack of a coherent national identity, or the presence of contending national identities within the state, lack of a clear and observed hierarchy of political authority, a high degree of state control over the media. [31]

Any of these situations could define a role for outside intervention. I would argue that all of these rights violations are fundamentally violations of health and well being. But in very few cases would these

situations lead to a justification of a military solution with the caveats introduced above.

Democracy was restored and dozens of dictatorships in southern Europe, Latin America and southeast Asia were overthrown by internal societal forces in the last for decades. We must rely on a society's internal resilience or use international civil society to mitigate negative effects and to promote social change. Outsiders can sometimes reinforce these by facilitating informational exchange, providing solidarity and shaming.

Harm Reduction

What other strategies might be applied? Where a cure cannot be achieved, sometimes in medicine a harm reduction model is employed. Recognising that most drug abusers have trouble controlling their behaviour and a just say no approach may not be the best. The same may be true for teenage pregnancy. The US with a 'just say no' policy has numbers far inferior to more liberal western countries both with drug abuse and teen pregnancy. Harm reduction models to give heroin abusers heroin, substitute another narcotic methadone or exchange needles, have sometimes had some success.

Such an approach in international affairs would not mean turning a blind eye to human rights abuses or 'constructive engagement' of regimes practising genocide, torture, but helping other regimes manage their major social issues one step at a time, in their own cultural context within their resource limitations.

So simultaneously the new model allows for the expansion of the legal ability to launch a war but with such caveats as just cause, right intention right authority chances of doing more good than harm and last resort, in practice setting such a high bar for intervention, it rarely would sanction war.

Tertiary Prevention: Rehabilitating Society

In the aftermath of war general violence remains high (including domestic), infrastructure is destroyed and health needs are not met. Empowering civil society, promoting rights and rebuilding the social fabric is essential to prevent a renewal of violent conflict-mechanisms similar to primordial and primary prevention. Devoting resources to rebuilding societies may prevent more costly conflicts from resuming. I will refer to only one mechanism for rebuilding society.

Promoting Social Capital: An example of Tertiary Prevention

Promotion of Social Capital [32] refers to features of social organisation (from family community to nation) such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit. In ecological analyses, U.S. states with low levels of social capital have been shown to have higher mortality rates and worse health status [33]. Promoting social capital promotes health via stress-buffering and the provision of social support through extra-familial networks, as well as informal social control over deviant health behaviours such as underage smoking and alcohol abuse. At higher levels of social organisation, e.g., states and nations, social capital may enhance health through indirect pathways, such as encouraging more egalitarian patterns of political participation that in turn ensure provision of adequate health care, income support for the poor, and other social services. [34] Social capital would therefore be associated, on the one hand, with social networks and the norms they promote (horizontal associations) and, on the other, with values and links, such as religion, ethnicity or socio-economic status (vertical associations), that transcend a community's social divisions. A broader vision of social capital takes into account the two types of associations mentioned, as well as the social and political environment that shapes social structure and helps in the development of norms. Enhancing health in these ways reduces the chance of violence.

6. USING HEALTH TO DETERMINE RISK/BENEFIT-IRAQ CASE STUDY

Let us look at the recent US war on Iraq. I will not examine this from a Just War or ethical point of view, as many leading figures from Jimmy Carter [35] to theologians have shown how the war could not be considered 'Just'. But was it right and could the outcome have been predicted?

Assessing Diagnosis and Therapy-Appling the Medical Model to Iraq

As physicians, not only must we get the diagnosis right, we must evaluate risk vs. benefit before any action-be it drug therapy, surgery or radiation. At the very least it uses epidemiological knowledge to allow the public to rationally weigh the pros and cons of war from a health perspective. At best it allows us to evaluate the consequences of "pre-emptive war" and engage in primary prevention by choosing non-

military means to deal with perceived threats. These are often cheaper, more effective and sustainable alternatives to war.

The devastating effect of sanctions [36], was predictable from work of the Harvard Study Team immediately after the first Gulf War, [37] and published in the New England Journal of Medicine. It turned out to cause severe damage and turned out to kill 1.5 million people [38] for weapons that didn't exist-an abstraction for policy makers.

As the military says it doesn't do Body Counts, several groups have sprung up to fill the void. The direct civilian casualties from the second Gulf war have been documented by a group from the UK, Iraq Body Count. [39] A retrospective study by Johns Hopkins University [40] shows ten times the number of indirect casualties, about 100,000, with general mortality being 2.5 times greater than pre-war and violent death 58 times greater. One year prior, the Report Collateral Damage [41] A medical report by Medact and International Physicians for the Prevention of Nuclear War predicted between 48,000 and 250,000 deaths, though was unable to predict the conduct of the war. The International Study Team and the World Health Organization published similar figures and attracted the attention of medical and mainstream media. [42] Though shortly after the war, the Coalition Provisional Authority set up by occupying US forces put a halt to a Health Ministry survey of civilian casualties and preventing release of any data collected, 60 per cent of both conflict related deaths and injuries in Iraq in the last half of 2004 were each by the U.S.-led coalition and Iraqi security forces. [43]

Even a simple family doctor could predict the consequences of war. In an article [44] before the second Gulf War I asked, "How imminent and credible is the threat? What will it do for our own safety? What will this do to the economy? What will it do to international institutions? What will this do to the Iraqi people? What will this do for countries and peoples in the region?" And each of my conclusions have turned out to be true.

For the Region, nothing could have benefited Osama bin Laden more than a US military bogged down in one country and a ready supply of recruits, stimulated by anti-American feeling in response to the chaos and suffering of the Iraqi people. US pact with the devil, support for dictatorships in Pakistan, Saudi Arabia, Uzbekistan as the lesser evil, recalls previous support for Saddam and Osama and certainly will not hurt Bin Laden in his recruiting drive.

The \$200 billion price tag of the war [45] was also predicted. That there were no weapons of mass destruction or connection with 9/11. It was backed up by substantial evidence of weapons inspectors, Hans Blix and Scott Ritter (not one of Donald Rumsfeld's known unknowns). The evasion of accountability with the argument that absence of evidence is not evidence of absence would not be tolerated in a medical forum. The US manipulation of intelligence (or in a more charitable interpretation, incompetence) will affect US credibility the next time the US tries to convince the world community to act. Torture stories and lack of process from Abu Gharib and Guantanamo will haunt the US when it tries to cite Geneva Conventions.

For international order, I wrote of the dangers of unilateralism potentially undoing 150 years of development of international laws and the UN "Having alienated allies and the UN, the US, without a plan to establish law and order, now invites the international community to help mop up. The dangers of this precedent will haunt the US for decades to come as other countries launch preventive wars ... unless deterred by threat of US force. And the mobilisation of civil society and religious leaders against the US administration cannot help US interests either.

Shortly after the invasion in April 2003 I wrote, "Balancing desires of the majority Shias, with Kurds, Sunnis, and other ethnic and religious minorities, together with concerns of neighbouring Iran and Turkey will be challenging. In the current chaos, with electricity, water supply and sewage systems destroyed, hospitals looted and aid workers unable to enter many towns with security concerns, the humanitarian situation is guarded." [46] With Iraqis dependent on food handouts with fewer job and civilian infrastructure un-repaired, there remains strong opposition to US Occupation.

A system approach would go beyond thinking of US military casualties as the true cost of the Iraq War, looking at Americans health needs not being met with the massive investment on the Iraq war. [47]

If politicians and generals are incapable of doing accurate calculations or will not even try, particularly for wars of choice, perhaps war is too serious a matter to be solely left in their hands and they should not be allowed to launch battles..

What if we had applied the medical model, in particular the caveats of Responsibility to Protect?

The war worked neither on humanitarian grounds nor on practical grounds. But further it failed to meet the very logical bar set by responsibility to protect. Short of an immediate attack, *Right Authority* would have had to be conferred by the UN, which denied sanction. It certainly did not appear to be a *Last Resort*. Though *Right Intention* is claimed retrospectively, as other arguments fall like a house of cards, was this the only, or even best way to get rid of dictator? As I wrote prior to the war applying a health model, the right question was not ‘Was Saddam Hussein a bad guy?’ Rather it was ‘Was Saddam Hussein dangerous to his people or the outside world?’[48] Alternatives to war even in the case that Iraq defied international order and had weapons of mass destruction were multiple, and included regular inspections inside the country and at its borders, arms control measures, political and military sanctions. Support for regional peace processes and in particular a just solution to the Israeli-Palestinian question, could have helped in the court of Arab public opinion. Any sort of urgency was only with an eye on the US electorate. And if the threshold were reached to get rid of Saddam Hussein the possibility of promotion of civil society institutions and other non-military support was far from exhausted.

What about Saddam targeting his own people? What should be the threshold for action?

Though it is apparent that Saddam was largely in compliance with UN resolutions in the years leading to 2002. But what if the rules of R2P had been in place and Saddam had chosen to attack the Marsh Arabs, those Shias that he thought might favour Iran or the Kurds, (at times when the West actively supported him or considered intervention not worth the price.) as he did at various times in the last quarter century? Under these circumstances, intervention, through an empowered UN, (hopefully supported by the major powers) might have been justified. It appears from observation of Saddam’s actions, that credible threat and fear of internal rebellion, intervention of neighbouring states and the Arab street would have deterred such action.

But beyond this (an argument against secondary prevention are the health promotive aspects, the primordial and primary prevention. As Iraqi society was becoming more prosperous, with a rising, educated middle class, with its health standards and rights of women improving, Iraq’s threats to its neighbours was diminishing. Beyond the colonial map-drawing, disrespectful of ethnic, religious and cultural ties, the war against Kuwait which led to the first Gulf War occurred as Iraq sought to find cash for its massive debt repayments. Saddam counted on the

Arab street to support his wars. Even this might have been reduced had their been promotion of Kuwait as a free, democratic society and promotion of a more just settlement for Palestinians.

7. IS THIS HEALTH-BASED MODEL OR COLLECTIVE ACTION ON GLOBAL THREATS REALISTIC?

Yes the Realist answers, but can the real world function with such principles? My answer would be that it already has. In the name of the collective security nations of the world community have been able to work together to respond to many current global threats. [49] Some of these coerced by economic means of western powers or military threat, but mostly countries, through public pressure are willing to give up short term individual economic or strategic gain for the greater good. Sometimes it takes tragedies such as the recent Tsunami relief to get nations to cooperate. Greece and Turkey had a thaw in relations a few years ago in response to the Turkish earthquakes.

With specific health challenges, nations too, have been willing to give up sovereignty, to cooperate to deal with common threats, to trust their neighbours to do the right thing. In these cases the external threat may be even more lethal, and less amenable to negotiation than any threat in international affairs. SARS is only the most recent example of a possible epidemic that may have been thwarted by superb international cooperation through the World Health Organization (WHO). The WHO's new regulations governing the control of infectious disease, [50] focus on strengthening global surveillance, improving communication between WHO and member states, and ensuring that each country has the laboratory capacity to rapidly identify outbreaks and specific measures to prevent disease spread at airports, ports, and other points of entry. States are required to notify the WHO of "all events potentially constituting a public health emergency", regardless of cause. Smallpox has been eradicated despite a few countries choosing to keep samples of the virus-for defensive purposes.

How about purely military affairs? Limited success was achieved with the signing of the Partial Test Ban Treaty in 1963, which banned nuclear tests in the atmosphere, underwater and in space. However, neither France nor China, both nuclear weapon States, initially signed the PTBT in 1963.[51,52] Yet in response to international pressure these countries later respected the provisions of the treaty. With a bit more support from the United States there could have been a comprehensive test ban treaty (CTBT). Norms are changed and hard power no longer is the only currency. The International Criminal Court (ICC) and Ottawa

Landmines Treaty have had their effects even on powerful non-signatories such as the US as allies are reluctant to offer exemptions. The support of health organisations was critical in the ICBL. International Physicians for the Prevention of Nuclear War has also succeeded in making nuclear weapons not just a military strategic issue-but an ethical, environmental and health one.

Ultimately our own health and well being is important to us and we extend that to those we value family and community. The further removed people are, the less value less we place on the lives of others, but tsunami response showed that concern for those very remote is still significant. Enforcing these rules and working with other countries will not mean that the US (or the Global North) will win every battle or be able to enforce its will or even universal values each time, but it will be a heck of a lot more successful than now. With support and resources including military and economic rather than defiance think of how much more potential it has to get what it needs.

Robert Kaplan [53] shows that if the Global North does not work to reduce tensions in all phases, that conflict will come to our doorsteps.

The cities of West Africa at night are some of the unsafest places in the world. Streets are unlit; the police often lack gasoline for their vehicles; armed burglars, carjackers, and muggers proliferate. "The government in Sierra Leone has no writ after dark," says a foreign resident, shrugging.

West Africa is becoming the symbol of worldwide demographic, environmental, and societal stress, in which criminal anarchy emerges as the real "strategic" danger. Disease, overpopulation, unprovoked crime, scarcity of resources, refugee migrations, the increasing erosion of nation-states and international borders, and the empowerment of private armies, security firms, and international drug cartels are now most tellingly demonstrated through a West African prism. West Africa provides an appropriate introduction to the issues, often extremely unpleasant to discuss, that will soon confront our civilization.

And these threats can reach the shores of countries of the North. Hurricane Katrina in Mississippi and Louisiana may be a portent of things to come in societies that fail to meet global challenges in an interdependent world. The localized violence in New Orleans following Hurricane Katrina, as a result of desperation and profiteering, in an environment of extreme inequality, lack of social cohesion,

chronic neglect and mistrust made even the offering of aid impossible. The panic over oil prices even sparked minor incidents of violence in my province of Ontario in Canada,

Denying science of climate change failing to meet the basic needs of its citizens, maintaining economic disparity, allowing the proliferation of small arms, having its National Guard underfunded and bogged down in Iraq all may have put the US at higher risk when it came to this 'unforeseen' event.

8. GETTING TO THE NEW SOCIAL CONTRACT

In psychiatry we see people in denial, engaging in self-destructive behaviour with all sorts of defence mechanisms to change. When people have distorted perceptions based on past experience, which leads to irrational feelings or conclusions and self destructive actions, Cognitive Behavioural Therapy may be employed to restore health to the individual. In the current climate of fear, such techniques might be applied to the collective. We must explain the cognitive distortions (forgetting that human health and well being is the primary goals, that overreaction to fears can make us insecure and threaten others and make our behaviour congruent with our goals.

In family medicine we see that to move from stages of change, from pre-contemplation to action requires time. Even in medicine, many are unwilling to give up biomilitary thinking. Thus far the global body politic has not seen it fit to speak with a common voice in international political affairs as it can about health. Those who hold military and economic power, the one's who have the most to lose have not seen it in their interests to share that power.

To move to a system where a state's ultimate responsibility is the health and welfare (and human rights) of all of its citizens is a leap for many. To define state failure as the unwillingness or incapability to do so and to put the responsibility then on the international community to react may seem radical. To have right authority conferred on a reconceived UN whose mandate is to be responsive to the needs of world citizens and to apply military power, only with the caveats of ICISS and as a last resort, to be operating on the principle of doing no harm, to and to persuade those in power that is in their long-term self-interest may be a difficult sell.

I will end with the immortal words of the German anatomist, physician, social scientist and bureaucrat, Rudolf Virchow.

“If medicine is to fulfill her great task, then she must enter the political and social life.” “Politik ist weiter nichts als Medizin im Grossen” –Politics is nothing more than medicine on a grand scale [54].

Neil Arya, BAsc MD CCFP FCFP is Adjunct Professor in Environment and Resource Studies at the University of Waterloo, Assistant Clinical Professor in Family Medicine at McMaster University Adjunct Professor of Family Medicine at the University of Western Ontario and teaches a course in Peace through Health at the University of Waterloo. He is Vice President of International Physicians for the Prevention of Nuclear War and has served as President of Physicians for Global Survival.

Acknowledgments The author would like to thank Joanna Santa Barbara and Mary Wynne Ashford for help with development of concepts in this article. Amelie Baillargeon did the lion’s share of editing but I was also helped at various stages by Peter McCullough, Mary Louise McAllister and Erin Rogozinski.

- [1] A Einstein, in Neligh, R.D., “The Grand Unification: A Unified Field Theory of Social Order”, New Constellation Press, 1997, Found at <http://www.nature-of-nature.com/natwholeness66a.html>
- [2] Hippocratic Oath, 1999, available at <http://members.tripod.com/nktiuro/hippocra.htm>
- [3] Nuremberg Code, 1949 from Trials of War Criminals Before the Nuremberg Military Tribunals Under Control Council Law No. 10", Vol. 2, Nuremberg, October 1946 - April 1949. (Washington, DC: US Government Printing Office, 1949). pp 181-182 available at <http://www.dreamscape.com/morgana/nurmburg.htm>.
- [4] Joanna Santa Barbara, “Conflict Analysis Chapter, Dealing with Conflict”, “Reconciliation” in Afghan Peace Manual Reference, 2001, available at <http://www.humanities.mcmaster.ca/%7Empeia/peacemanual.pdf>, pp 1-34; 98-119

- [45] Alma Ata Declaration, 1978, available at www.who.int/hpr/archive/docs/almaata.html.
- [6] Ottawa Charter for Health Promotion, presented at the First International Conference on Health Promotion, Ottawa, 21 November 1986, available at <http://www.who.int/hpr/archive/docs/ottawa.html>.
- [7] S Yusuf, S Anand, G MacQueen, “Editorial: Can medicine prevent war?”, *British Medical Journal*, 317(Dec), 1998, pp. 1669-1670. S Yusuf, S Anand, G MacQueen, “Can medicine prevent war? Imaginative thinking shows that it might”, *BMJ*, 317(Dec), 1998, pp. 1669-1670, available at <http://bmj.com/cgi/content/full/317/7174/1669>.
- [8] Stewart Frances. “Root causes of violent conflict in developing countries”, *BMJ*, 324(9 Feb), 2002, pp. 342-345, available at <http://bmj.bmjournals.com/cgi/content/full/324/7333/342>.
- [9] United Nations Development Programme Arab Human Development Report, 2002 on Annual basis, available at <http://www.undp.org/rbas/ahdr/>.
- [10] Gwynne Dyer, “Why tyrants rule Arabs- For 60 years, the West has propped up Arab despots, creating poverty and illiteracy where education once thrived”, *Toronto Star*, 20 Jul. 2004, p.
- [11] Dr. Neil Arya, “Bombs are not the answer”, *The Record*, 3 Nov. 2001, p. A19.
- [12] Soros, George, “Toward a Global Open Society”, *The Atlantic Monthly*, 281(1), 1998, pp 20 - 32.
- [13] George Soros, “The Capitalist Threat”, *The Atlantic Monthly*, 279(2), 1997, pp 45-58. Available at <http://www.theatlantic.com/issues/97feb/capital/capital.htm>.
- [14] George Soros, 1997.
- [15] Intergovernmental Panel on Climate Change (1996), Climate Change 1995, The Science of Climate Change, Summary for Policymakers and Technical Summary of the Working Group I Report
- [16] Environment Canada, 2002, available at http://www.smc.ec.gc.ca/saib/climate/Climatechange/ccd_9801/sections/5_e.html
- [17] Universal Declaration of Human Rights, adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948, available at <http://www.un.org/Overview/rights.html>
- [18] Amartya Sen, *Poverty and Famines* (Oxford: Clarendon Press, 1981), and *Hunger and Entitlements* (Helsinki: World Institute for Development Economics Research, 1987) See also Tanco Memorial Lecture 1990

- [19] Sen, Amartya 1999 Democracy as a Universal Value 1999
<http://muse.jhu.edu/demo/jod/10.3sen.html>
- [20] People’s Health Charter, 2000, available at
<http://phmovement.org/charter/pch-english.html>.
- [21] Millennium Goals, 2000, available at
<http://www.developmentgoals.org/>
<http://www.un.org/millenniumgoals/>, <http://www.undp.org/mdg/>.
- [22] Peter Schwartz, Doug Randall, “An Abrupt Climate Change Scenario and its Implications for United States National Security”, 2003, available at
http://www.ems.org/climate/pentagon_climatechange.pdf.
- [23] Dom Helder Camara Brazilian Bishop
<http://www.hungernomore.org/quotations.html>^{<http://www.domhelder.com.br/ingles/>}.
- [24] Neil Arya, Letter to Tome Magazine Charles Krauthammer's argument for invading Iraq in "The Terrible Logic of Nukes" [Essay, Sept. 2] is just that: terrible logic. Iraq wants nuclear weapons to balance Israel's, which built them to balance Arab conventional superiority. Pakistan wanted to balance India, which had to balance China, which had to balance Russia, which had to balance the U.S. and its allies, which had to balance Russia's presumed European-theater superiority. Throughout this balancing act, the world has been no more than 30 minutes away from Armageddon. The only logical way to keep nuclear weapons out of the hands of madmen is to renounce them ourselves. Arya Neil, Krauthammer Charles, “response to The Terrible Logic of Nukes”,
<http://www.time.com/time/magazine/article/0,9171,1101020923-351218-2,00.html> response to The Terrible Logic of Nukes Charles Krauthammer
<http://www.time.com/time/magazine/article/0,9171,1101020902-344059,00.html>
- [25] IMTD Institute for Multitrack Diplomacy, available at
www.IMTD.org.
- [26] Joanna Santa Barbara, 2001.
- [27] Gareth Evans, Mohamed Sahnoun, “The Responsibility to Protect”, *Foreign Affairs*, November/December, 2002, available at:
<http://www.foreignaffairs.org/20021101faessay9995/gareth-evans-mohamed-sahnoun/the-responsibility-to-protect.html>
<http://www.dfait-maeci.gc.ca/iciss-ciise/report-en.asp>
- [28] Ibid.
- [29] Ibid.
- [30] Lee Feinstein, Anne-Marie Slaughter, “A Duty to Prevent”, *Foreign Affairs*, January/February, 2004, pp. 136-150

- [31] Buzan Barry, *People, States and Fear: An Agenda for International Security Studies in the Post-Cold War Era* Second edition,. Boulder, Colorado Lynne Reinner, 1991 quoted in "Failed States and International Security: Causes, Prospects, and Consequences" Purdue University, West Lafayette February 25-27, 1998 Michael Stohl Purdue University George Lopez University of Notre Dame Westphalia, *the End of the Cold War and the New World Order: Old Roots to a "NEW" Problem.*
- [32] Robert Putnam from Source: John D. and Catherine T. MacArthur, "Research Network on Socioeconomic Status and Health", UCSF, 1999, Revised 13 November 2000, available at <http://www.macses.ucsf.edu/Research/Social%20Environment/notebook/capital.html>.
- [33] Kawachi, I., Kennedy, B. P., Lochner, K., *et al* (1997) Social capital, income inequality, and mortality. *American Journal of Public Health*, 87, 1491-1498 Putnam, 2000.
- [34] Coleman, James S. 1988. "Social Capital and the Creation of Human Capital." *American Journal of Sociology*, pp. S95-S121 Fukuyama, Francis. "Social Capital and the Global Economy," *Foreign Affairs* 74 (5) 89-103 (Sept./Oct. 1995). (1995) *Trust, the Social Virtues and the Creation of Prosperity*, London: Hamish Hamilton.
- [35] J. Carter , "Just War Theory", *New York Times* 9 march 2003, available at www.nytimes.com/2003/03/09/opinion/09CART.html
- [36] J. Mueller, "Sanctions of Mass Destruction", *Foreign Affairs*, May-June, 1999, pp 43-53.
- [37] A Ascherio, R Chase, T Cote, G Dehaes, E Hoskins, J Laaouej, M Passey, SI Qader, SF Shuqaide, MC Smith, and et al. "Effect of the Gulf War on infant and child mortality in Iraq", *NEJM*, 327(13), 1992, pp 931-36, available at <http://content.nejm.org/cgi/content/abstract/327/13/931>.
- [38] N Arya, S. Zurbrigg, "Operation Infinite Injustice: The Effect of Sanctions and Prospective War on the People of Iraq", *Can J Pub Health*, 94 (1), 2003, pp 9-12, available at <http://www.humanities.mcmaster.ca/peace-health/Iraqcomm.pdf>.
- [39] www.iraqbodycount.org
- [40] L Roberts , R Lafta , R Garfield , J Khudhairi , G. Burnham , "Mortality before and after the 2003 invasion of Iraq: cluster sample survey", *The Lancet*, 364 (9448), 2004, pp 1857-1864.
- [41] Collateral Damage Report of Medact 2002,2003,2004 <http://www.ippnw.org/CollateralDamage.html>
- [42] J. Clark, "War on Iraq could produce a humanitarian disaster, health professionals warn", *BMJ*, 325(1134), 2002, 1134, available at <http://bmj.com/cgi/content/full/325/7373/1134>.

- [43] AP, “Coalition, not insurgents, killed most civilians: BBC”, *Toronto Star*, 29 Jan. 2005, from on-line edition. BAGHDAD— Coalition troops and Iraqi security forces may be responsible for up to 60 per cent of conflict-related civilian deaths in Iraq — far more than are killed by insurgents, the BBC reports. Data from the beginning of July, 2004, through the end of the year covers all conflict-related civilian deaths and injuries recorded by Iraqi public hospitals. The figures exclude, where known, the deaths of insurgents, the BBC says. The figures reveal that 3,274 Iraqi civilians were killed and 12,657 wounded in conflict-related violence during the period. Of those deaths, 60 per cent — 2,041 civilians — were killed by the U.S.-led coalition and Iraqi security forces. A further 8,542 were wounded by them. Insurgent attacks claimed 1,233 lives and wounded 4,115 people in the same period. Official figures compiled by Iraq's Ministry of Health break down deaths according to insurgent and coalition activity, according to the BBC website. The figures are normally available only to Iraqi cabinet ministers, it says.
- [44] N Arya, “Editorial Ask the Right Questions!”, *Ottawa Citizen*, 7 Mar. 2003, .
- [45] National Priorities Project (2005) www.costofwar.com
- [46] N Arya, “Winning the Peace (letter) US offers little hope for winning Iraq peace”, *Ottawa Citizen*, 4 May 2003, available at <http://www.canada.com/ottawa/ottawacitizen/letters/story.asp?id=3B5CC8F9-CEC1-44BB-90F5-787616602F1F>.
- [47] Nicholas D. Kristof, “Health Care? Ask Cuba”, *New York Times*, 12 January 2005, available at <http://www.nytimes.com/2005/01/12/opinion/12kris.html?oref=logi n&th>. Here's a wrenching fact: If the U.S. had an infant mortality rate as good as Cuba's, we would save an additional 2,212 American babies a year. According to the latest C.I.A. World Factbook, Cuba is one of 41 countries that have better infant mortality rates than the U.S. Even more troubling, the rate in the U.S. has worsened recently. And their mothers, because women are 70 percent more likely to die in childbirth in America than in Europe. Bolstering public health isn't as dramatic as spending \$300 million for a single F/A-22 Raptor fighter jet, but it can be a far more efficient way of protecting Americans. For example, during World War II, the employment boom meant that many poor Americans enjoyed regular health care for the first time. So even though 405,000 Americans died in the war, life expectancy in the U.S. actually increased between 1940 and 1945, rising three years for whites and five years for blacks. Last year, a study by the Institute of Medicine, a branch of the National Academy of Sciences, estimated that the

lack of health insurance coverage causes 18,000 unnecessary deaths a year.

- [48] Feinstein and Slaughter, 2004.
- [49] <http://www.fortunecity.com/bally/waterford/96/append05.htm>
- [50] Editorial, "Public-health preparedness requires more than surveillance", *The Lancet*, 364(9446), available at http://www.thelancet.com/journal/vol364/iss9446/full/llan.364.9446.analysis_and_interpretation.31170.1.
- [51] David Krieger Nuclear Arms Control Treaties (2005) <http://www.nuclearfiles.org/hictbt/ctbt-docs.html>
- [52] <http://www.nuclearfiles.org/redocuments/1963/631010-ptbt.html>
- [53] Robert D. Kaplan The Coming Anarchy The Atlantic February 1994 How scarcity, crime, overpopulation, tribalism, and disease are rapidly destroying the social fabric of our planet http://www.thestar.com/NASApp/cs/ContentServer?pagename=thestar/Layout/Article_PrintFriendly&c=Article&cid=1090275619198&call_pageid=968256290204
- [54] Virchow, Rudolf Die medicinische Reform 3. November 1848 Die medicinische Reform. Wochenschrift, herausgegeben von R. Virchow und R. Leubuscher. Berlin .<http://www.uni-heidelberg.de/institute/fak5/igm/g47/bauervir.htm>"Wer kann sich darüber wundern, dass die Demokratie und der Socialismus nirgend mehr Anhänger fand, als unter den Aerzten? dass überall auf der äussersten Linken, zum Theil an der Spitze der Bewegung, Aerzte stehen? die Medicin ist eine sociale Wissenschaft, und die Politik ist weiter nichts, als Medicin im Grossen"