

Weapons of Mass Destruction and the End of War?

—Douglas Alan Ross

The surprising and unexpectedly non-violent end of the Cold War—the simple collapse of the Soviet state and its associated empire without the catalyst of major warfare—persuaded many commentators that the human species does have some real hope of escaping doom from the vast arsenals of nuclear and biological weapons developed with such energy and expense during the last half of the 20th century. The absence of great power warfare during the so-called ‘long peace’ of the atomic and thermonuclear led scholars of international relations such as Kenneth Waltz and John Mueller to speculate that all-out war had become both unthinkable and ‘un-doable’.

Waltz opined that the prospect of nuclear warfare had become so utterly dreadful, and therefore powerfully deterring, that the further spread of nuclear weapons to governments beyond the original five was not cause for worry. India and Pakistan with nuclear weapons would act, he believed, in much the same way as the Americans and Soviets had during most of the Cold War—extremely prudently. Caution, conflict avoidance with nuclear armed neighbours and mutual deterrence would, he argued, become the standard widely emulated pattern of behaviour by ‘new’ nuclear powers.¹

Mueller, another American international relations specialist, went even farther suggesting that even major war without the use of nuclear or biological weapons had become unthinkable. War itself was becoming illegitimate and because it is just another learned human ‘institution’ it can be unlearned and discarded as an inappropriate, distasteful and ultimately uncivilized state instrument. Like slavery, dueling (or smoking) such behaviour can be collectively discarded



in the 21st century as an unnecessary and archaic social activity.² For Mueller, the history of warfare suggests that war as an institution is as much an ‘affectation’ as it is a collective affliction. Warfare in the industrial age has become so horrific—even without the use of nuclear or biological weapons—that it is probable, not merely plausible, that with respect to the future of war we may say with confidence that even if its days are not numbered, its years surely are. Is such optimism unwarranted?

The purpose of this short lecture is to lay out some of the reasons why I have not been able to share this *fin de siècle* optimism about the human future. Where others have expressed guarded hope that we may be on the verge of a great ‘transformation’ in international behaviour that will end war, I see such claims as more the product of wishful thinking than persuasive empirically rooted analysis of concrete evidence. The shadow cast by the first detonation of an atomic bomb in anger at 8:15 AM on August 6, 1945 still lingers. It has been reinforced by the much magnified terror

of vastly larger thermonuclear weapons (typically ten to a hundred times the explosive yield of the now merely ‘tactical’-size Hiroshima bomb). The ‘game’ of interstate deterrence has been expanded to include many covertly held arsenals of appallingly destructive biological weapons (scientifically enhanced anthrax, smallpox, pneumonic plague and so on), especially by those states who lack a nuclear deterrent to offset that held (or thought to be held) by their enemies or rivals, or who fear they may be ‘falling behind’ in their arms rivalry with various principal opponents. But most citizens of the advanced industrial states have only the vaguest awareness of the meaning of the phrase ‘weapons of mass destruction’ (hereafter referred to as WMDs).

Indeed a survey of American opinion conducted some three years ago found that 70% of respondents when asked to give some association with ‘Hiroshima’ were unable to give any response at all. I infer from this disturbing bit of information, as well as from the profound ignorance of my own students who arrive at SFU with little or no understanding of the history of the nuclear arms race, that forgetfulness and psychological denial seem to be the social norm with respect to the ‘bad news’ of WMDs. University students are not alone in their lack of systematic exposure to the dark side of modern industrial civilization. Many of our politicians seem remarkably ill-informed about the continuing risks posed by WMDs and have willfully ‘tuned out’ periodic complaints from Washington that defence issues still matter and that there is an international community problem ‘out there’ with respect to the continuing spread of WMDs to smaller states—and an associated risk that some of these devices might be conveyed to organized terrorist cells for use against the developed world.

¹ For the most recent systematic statement of Waltz’s nuclear optimism, see Scott D. Sagan and Kenneth N. Waltz, *The Spread of Nuclear Weapons: A Debate Renewed* (New York, London: Norton, 2003).

² John Mueller, *Retreat from Doomsday: The Obsolescence of Major War* (1989).

The technologies involved in building atomic bombs are widely known and have been accessible internationally for many years. While the vast majority of states have rejected the nuclear option, the number of atomic or nuclear powers has continued to rise: American, Russian, British, French and Chinese arsenals were well underway by the time the Nuclear Nonproliferation Treaty (NPT) went into force in 1970. Shortly after it went into force, or perhaps even before, Israel acquired its first atomic weapons. In May 1974 India detonated its 'peaceful nuclear explosion'. Twenty-four years later, 'peaceful explosions' gave way to a full series of weapons development tests; a few weeks later Pakistan followed suit. Both India and Pakistan have several tens of weapons 'operational' as well as fighter bombers and short- and medium-range missiles able to deliver them against each other with virtually no warning. A 'limited' nuclear war between New Delhi and Islamabad that escalated from 'battlefield' use at the outset, might easily kill 100 million people in a few hours.³ Over the past two years American analysts have worried about the ability of Pakistani President Musharraf to maintain central control over the country's weapons and fissile materials, invoking the spectre of al Qaeda sympathizers in the armed forces and scientific community handing over weapons to terrorists. In October of 2001 the American and Russian governments developed contingency plans for the rapid deployment of special forces into Pakistan to seize and safeguard the Pakistani atomic arsenal if they judged the risk of al Qaeda gaining control of some of these weapons to be high.⁴

The U.S. and its coalition allies invaded Iraq twice in 1991 and 2003 to halt further development of nuclear weapons in that country. Meanwhile North Korea has moved ever closer to its first atomic test, and the Iranian government has continued to move towards the acquisition of an independent nuclear arsenal. If Iraq, Iran and North Korea are not seen plausibly by most Canadians as an 'axis of evil', they most assuredly do constitute an axis of potential nuclear weapons proliferation—and both an

Thus the contemporary context for any supposed 'transcendence' of war is—at least from my perspective—decidedly unpromising. Weapons of mass destruction continue to spread to more countries. While the reduction in the number of actual deployed nuclear warheads from 1986 to 2003 has been impressive...the danger of such weapons actually being used has been increasing according to most strategic analysts.

increased risk of nuclear use and a stimulant to further proliferation by neighbours of these three states. The current Bush Administration's

commitment to strategic 'preemption' (in fact more properly described as 'preventive war') is the direct consequence of fears that new nuclear proliferators might develop atomic bombs and either hand them over directly to terrorists (or alternatively HEU fissile material) or *might attempt to covertly introduce such weapons into the United States.*

A crude 10 to 15 kiloton atomic bomb could be made from about 45 kilograms of HEU shaped into two metallic hemispheres that when driven together would be about the size of a cantaloupe. Smuggling several dozen 23 kilogram 'cantaloupe' halves encased in lead-lined containers would be certainly a dangerous and risky undertaking, but there is public evidence suggesting that past Soviet governments may have already done it.⁵ American borders were quite porous during the Cold War and they have not been tightened appreciably since the events of 9/11.⁶ Even though the U.S. defence budget is larger than the next 12 countries' military spending combined, and even though the American military is far ahead of all other armies in the development of the Revolution in Military Affairs (complex information processing networks for the battlefield, remote sensing from satellites or robotic aircraft, stealthy aircraft and missiles, and the acquisition of inexpensive 'precision guided munitions'), American citizens are far from being safe inside their own borders. Aerial robots, 2 billion dollar stealth bombers and even anti-ballistic missile defences costing tens of billions of dollars are irrelevant to the threat posed by smuggled atomic devices in the trunks of rental cars.

³ A point made by former American ambassador Richard Burt in one of President George W. Bush's pre-election policy seminars.

⁴ A claim made by Bruce Blair, head of the Center for Defense Information in Washington. See his various columns over the last two years for the CDI at www.cid.org.

⁵ See Joseph C. Anselmo, "Defector Details Plan to Plant Nukes in U.S.," *Aviation Week and Space Technology*, 17 August 1998, p. 52.

⁶ Roughly a million cargo containers a month enter the U.S. but only 2 to 3 percent receive any screening or X-raying, and of that small fraction only a very few are actually 'destuffed' and scrutinized. And despite the 'war on drugs' being close to twenty years old, the volume of illegal drugs entering the U.S. each year still amounts to hundreds of tons.

A small Hiroshima-sized bomb of about 15 kilotons (equivalent to 15,000 tons of TNT—the 1995 Oklahoma City blast for comparison was roughly equivalent to 2 tons of TNT) detonated at SFU Harbour Centre would have a radius of complete destruction of buildings out to about 1.5 to 2.0 kilometers. The downtown and half of Stanley Park, most of East Vancouver over to Clark St. would be devastated. While North Vancouver would escape blast and thermal effects, the centre city would be utterly devastated across the Burrard and Granville bridges south to about 4th Avenue. A terrorist detonation in the middle of a working day of a crude Highly Enriched Uranium (HEU) bomb—perhaps for proof-of-capability demonstration purposes as part of a campaign of attempted blackmail of the American government—might kill 100,000 people or more promptly and cause probably an equal number of deaths in the weeks and months that followed due to burns, other injuries or radiation poisoning.

Faced with such an act of atomic terrorism and the then highly credible threat of it being repeated in many American cities shortly thereafter, unless Washington conceded whatever the terrorists were demanding (withdrawal from the Middle East of all U.S. forces, cessation of all aid for and trade with Israel etc.), it is not clear how the American government would react. One can only hope they will never be confronted with such blackmail. But that scenario, dire though it may be, is not the worst plausible imaginable scenario.

While groups like al Qaeda or elements of Hezbollah might think in terms of driving the new Anglo-American 'Crusaders' out of the Middle East, that at least would be subject to negotiation and avoidance of an absolute

catastrophe by involving some opportunity to comply (at least on an interim basis) with the terrorist demands and preclude the loss of a five or ten American cities. A far worse prospect would arise if a foreign government, fearful of overwhelming American might and a threatened campaign of 'regime change', decided to simply inflict grievous and possibly



irreparable damage to the American will and ability to intervene overseas by killing several million Americans while destroying most of the key port facilities on both coasts of the continental U.S.—while decapitating American political and military leadership at the same time. Perhaps a dozen HEU 'cantaloupes' could accomplish that horrific goal (with at least two being used to destroy the White House, Capitol Hill and the Pentagon), by careful siting of the blasts near key navy yards and civilian nuclear reactors in or near large cities (thus to increase a thousand fold the subsequent radioactive contamination).

The tide of scientific and engineering genius applied to the instruments of warfare shows no sign of abating any time soon. The Indian and Pakistani acquisition of nuclear weapons may well help incite or inspire Iran or Indonesia to follow suit. North Korea's neo-Stalinist regime may yet catalyze

either South Korean or Japanese decisions to move towards nuclear weapons status. The American abrogation of the ABM treaty that for three decades acted as the foundation of Soviet-American and then Russo-American nuclear arms control has unleashed deep anxieties in Beijing to the point where a new nuclear arms expansion is now imminent. Russian

responses to American post-9/11 nuclear unilateralist and declarations of American intent to 'weaponize' space have included threats to once again put multiple warheads on its largest rockets, the repudiation of several key terms of START II (specifically the obligation to eliminate all 'heavy' SS-18 ICBMs), and a decision to revive nuclear bomber flights in the high Arctic as well as the announcement of plans to acquire a new

generation of nuclear-capable, air-launched cruise missiles able to threaten targets all across North America. Worries about an American drive for a disarming first-strike capability against the shrinking Russian nuclear arsenal have also led to Russian retention of the fully automated 'Dead Hand' nuclear launch system that was created in the mid-1980s to guarantee retaliation against North America in the event that Moscow leaders were killed suddenly in a no-warning surprise attack (by stealth cruise missile, stealth bomber or by a short-warning forward deployed ballistic missile such as the Pershing II).

Maintaining a Strangelovian 'doomsday' launch system raises the risk of an inadvertent or accidental nuclear war considerably.

Thus the contemporary context for any supposed 'transcendence' of war is—at least from my perspective—decidedly

unpromising. Weapons of mass destruction continue to spread to more countries. While the reduction in the number of actual deployed nuclear warheads from 1986 to 2003 has been impressive (from almost 70,000 to fewer than 30,000), the danger of such weapons actually being used has been increasing according to most strategic analysts. Russian control of its arsenal of nuclear warheads is poor and 'loose nukes' from Russia or the other Soviet successor states may yet find their way into the hands of international terrorist groups. Some European investigative journalists claim that the current black-market price for a nuclear weapon is \$200 million (USD). And just as NATO governments fear Russian 'loose nukes' or fissile material getting into international black markets, many analysts now fear that Pakistan may be an even greater risk of 'leaking' bombs or fissile material to trans-national terrorists. In both Russia and Pakistan organized crime may assist in such a process.

In addition to fears that the risk of nuclear terrorism may be rising, the international community also is confronted by the possible collapse of the major institutions that have helped slow the spread of weapons of mass destruction. In 1998 a firm American bipartisan consensus in the Congress voted down the proposed ratification of the Comprehensive Test Ban Treaty (CTBT). By 2002 many American hawks in the Bush Administration and the Congress were clearly eager to resume nuclear testing—especially of new 'mini-nukes' for possible attacks on deeply buried and hardened targets where 'rogue' states or terrorists might have WMDs hidden from conventional attack. The desire to resume testing was a logical corollary to American rejection of the ABM treaty and the shelving of the START process (via replacement of formal, treaty-bound commitments to

cut numbers of weapons verifiably by dismantling with informally observed reductions in deployed warheads only, with 'removed' warheads merely being diverted to a 'hedge stockpile'). These developments cannot help but threaten the very survival of the NPT—the real foundation of the hope for controlling and eventually abolishing nuclear weapons. With much diminished prospects for the survival of the NPT,

In light of these discouraging thoughts there is a need to reaffirm that they are only possibilities. Humanity's collective self-extinction is only a contingent risk; it is not a certainty. What is important to realize, however, is that a failure to assess the world realistically and pragmatically can speed the world's population down the path of 'doom soon' rather than 'doom deferred'.

efforts to strengthen the Biological and Toxin Weapons Convention have also withered. The entire arms control and disarmament picture thus is very bleak.

While governments in Europe, Canada, Japan and Australia have deplored Washington's new WMD unilateralism, there is not much that they can do to limit the damage to the international arms control regime. Both the Japanese and Europeans are now urgently buying and developing missile defence technologies. With both the Russians and Chinese arsenals either staying far

larger than was hoped (Russia) or actually about to grow quickly (China), more and more high technology investment in Japan and Europe will fall to defence and aerospace firms.

These developments may portend something much more profound than a new round of nuclear/WMD anxiety of the type Western nations experienced powerfully during the early 1980s. Jonathan Schell recently posed a disturbing question for which there is no confident, quick, optimistic reply: Is it possible that 2001 will come to be seen like 1914—a year that marked the end of a long period of political liberalization, economic globalization and peace and stability among the great powers? Are we about to witness the collapse of the post-Cold War 'peace dividend' and the onset of the re-nationalization of defence policies and the re-militarization of many national economies? Might 9/11 trigger a truly revolutionary shift in American (and allied) domestic politics that sees civil liberties and democratic rights permanently curtailed?

Schell's worry list is as long and troubling as what I have laid out above: the possibility of tens of millions of dead arising from an inadvertent Indo-Pakistani nuclear conflict; the detonation of nuclear terrorist bombs in one or several European or North American cities; uncontrollable escalation of warfare between Israel and its neighbours such that both Israeli nuclear and Arab biological weapons are used with catastrophic effects and tens of millions of fatalities; major war on the Korean peninsula with the North Koreans killing several million South Koreans in their initial onslaught; a Sino-American war arising from the unforeseen escalation of the China-Taiwan conflict leading to the use of tactical nuclear weapons against American carrier task forces sent to aid the embattled Taiwanese.⁷ Schell goes on

⁷ See Jonathan Schell, "No More Unto the Breach", part I, "Why war is futile", *Harper's* March 2003.

to note: "...the principal sources of danger today are not, as before [in 1914] the mass conventional armies and systematized hatreds of rival great powers; they are above all, the widespread, unappeased demons of national, ethnic and class fury; the prospect that a single superpower, the United States, will respond to these dangers by pursuing a strategy of global military supremacy and the persistence or spread of biological or chemical weapons. It is impossible to predict how and when these elements might intersect to push history over the precipice."⁸ American paranoia (or legitimate fears), rising anti-American hatred across the Middle East and elsewhere in the Islamic world, and the accelerating diffusion of the technologies of mass death have created a qualitatively different geopolitical context than existed in the 1990s. As Schell observed, "September 11, although not itself the point of no return gave notice that such a moment may be approaching quickly".

Schell is not, however, a prophet of doom—far from it. His essay argues that the time is now right for the achievement of Woodrow Wilson's dream of a collective security system that would actually work. Now the futility, the apocalyptic futility, of war is starkly evident, and thus he declares "the bomb ruined world war by turning it into annihilation". And at the same time as people worldwide are appreciating this risk as never before, there is also a democratic wave rolling across societies and political systems that have hitherto never had any semblance of democracy at all—Russia being the most prominent exemplar of this phenomenon. The spread of liberal democracies, Schell suggests, will add to demands that an authentic collective security system be established. The liberal democratic

peace is entirely real, he believes, and will bear fruit in terms of fostering a critical majority of the world's population in support of peaceful change and community enforcement of norms of non-aggression and repudiation of weapons of mass destruction.

Schell's argument is appealing, but it is less than convincing. While it is true that the democratization of Germany and Japan after World War II led to the virtual



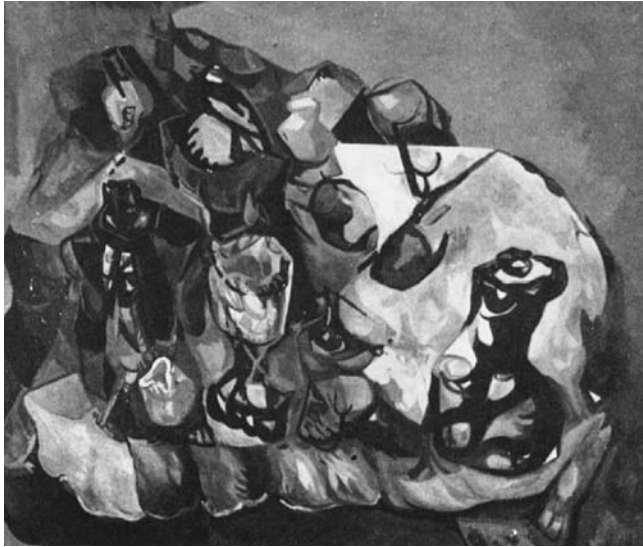
de-bellicization of their populations, and while the emergence (however halting and episodic it might be) of a unified Europe portends an end to the risk of war emanating from that region, such developments cannot assure us that the causes of war are about to be eliminated from the international system. To be sure, the collapse of the Soviet state spelled the end of the last great European territorial empire, but this hardly can be taken to guarantee that no other state will ever again aspire to old-style imperial rule. Chechen separatism or secessionism by other minority peoples in Russia may yet, through violent repression, unleash retrograde, atavistic political forces. Large parts of China's territory are in fact at risk of secessionist dismemberment as well. And no Indian political party is

ever likely to publicly assent to the secession of Kashmir. Democratic governance does not eliminate nationalism, rather it can in fact lead to its magnification and intensification—especially if governments are unable to deliver promised economic progress in the short-term.

While the American government has taken great pains to stress that its intervention in Iraq is in no way reflective of a developing 'clash of civilizations', many foreign observers have drawn precisely the opposite conclusion and have argued that American actions in Iraq and the 'war on terror' are intensifying this problem. American intervention in Iraq is typically excoriated by North American and British liberals as an example of imperialist propaganda and mythmaking (the WMDs that they are sure do not exist) and old-style economic predation so that the cronies of Texas oilmen can seize control of Iraq's cheap, exportable oil.

Few critics of the American intervention have given much thought to Israeli nuclear weapons (about 200 of which are usually said to be available) or the risk that they might be used. Both the interventions of 1991 and 2003 have in effect bought time for the negotiation of a tolerable armistice and 'settlement' between Israelis and Palestinians. Without the enforced de-weaponization of Iraq, the risk of an Israeli preemptive attack on Iraq would have loomed ever larger as an Iraqi arsenal moved towards full operational status. And any preemptive attack on suspected Iraqi WMD sites in the 1990s or after would probably have entailed the use of at least a few low-yield nuclear 'bunker busters' that would have inflamed the Middle East and world opinion still further while politically validating a headlong

⁸ Ibid.



rush to acquire nuclear weapons by Iran, Egypt, Syria, Saudi Arabia and so on.

The central point that needs emphasis is that the 'nuclear peace' is far from secure—indeed it is getting more insecure with each passing year. The tide of technological innovation is sweeping around the world just as fast or faster than the tide of democratization. Viewed from this perspective the risk of repeated wars in which nuclear and/or biological weapons are used is probably rising, not diminishing. And once the first true 'two-way' nuclear/biological conflict occurs the floodgates on proliferation may really open—thus setting the stage for repeated wars of genocidal attack. The risk of self-induced human extinction is thus also likely to be rising, not falling.

It is worth considering that the SETI researchers (Search for Extra-Terrestrial Intelligence) have been studying the heavens for several decades without finding any evidence of 'broadcasting' in any part of the electromagnetic spectrum. Some pessimists have ventured the depressing thought that

perhaps big-brain evolutionary experiments never last very long: such creatures tend to destroy themselves by creating 'tools' they cannot control. Intelligence may be in some fundamental sense self-liquidating. In other words, there is little or no hope that humanity will ever come close to matching the longevity record of various dinosaur species. Other

philosophers have noted the many other ways (many environmental, many psycho-social) in which the human future might vanish almost overnight and concluded that our departure from Earth's history is not only a very real risk, it may also be very imminent.⁹ Species mortality is a serious issue.

In light of these discouraging thoughts there is a need to reaffirm that they are only possibilities. Humanity's collective self-extinction is only a contingent risk; it is not a certainty. What is important to realize, however, is that a failure to assess the world realistically and pragmatically can speed the world's population down the path of 'doom soon' rather than 'doom deferred'.¹⁰ Taking control of the nuclear/biological/WMD proliferation issue is *the central issue* of world politics—despite the fact that George W. Bush is attempting to lead the charge on this issue. For North American and European liberals and social democrats, the idea that Bush whom they dislike so viscerally may actually be right about something so fundamental is simply 'not on'. But a psychological (as opposed to an

authentically intellectual) rejection of American policy may be precisely the sort of imperfect 'rationality' that leads to regional and later global catastrophes. Bush unilateralism is not the only way to deal with the proliferation crisis. But developing a coherent multilateral alternative requires universal recognition of the gravity of the problem and a shared willingness to assume the financial and human costs of resolving it. To date such a response is lacking.

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⁹ See John Leslie, *The End of the World* (Routledge, 1996).

¹⁰ Terms used by Leslie in *ibid.*