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Nuclear Weapons

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NUCLEAR WEAPONS

Albert Einstein said, “The unleashing of power of the atom bomb has changed everything except our mode of thinking, and thus we head toward unparalleled catastrophes.” The nuclear weapons age began at 5:29:45 A.M. Mountain War Time, July 16, 1945, when the first atomic bomb was detonated in a test on the bleak, barren New Mexico desert chillingly named Jornada de Muerto, or “Journey of Death.” After the thunderous roar of the shock wave, a huge pillar of smoke rose 30,000 feet, creating the first icon of the nuclear age—the fearsome mushroom cloud. A blast of energy of unprecedentedly destructive magnitude bathed the surrounding mountain in a brilliant light that could be seen 150 miles away.

J. Robert Oppenheimer, director of the Los Alamos Laboratory, the organization responsible for the design of the first atomic bomb as part of the Manhattan Engineer District of the War Department—better known as the Manhattan Project—uttered a sober description from the Hindu scripture, the Bhagavad-Gita: “Now I am become Death, destroyer of worlds.”

UNPARALLELED WEAPONRY

Today, there are approximately 17,000 nuclear weapons, many still on “hair-trigger alert,” ready to launch in thirty minutes or less (Federation of American Scientists 2012). In testimony before the International Court of Justice (ICJ) in 1995, then Foreign Minister of Australia Gareth Evans accused this global arsenal of “threaten[ing] the whole of civilisation. This is not the case with respect to any class or classes of conventional weapons. It cannot be consistent with humanity to permit the existence of a weapon which threatens the very survival of humanity” (ICJ 1995a, 42).

To wit, a five-megaton weapon represents greater explosive power than all the bombs used in World War II; a twenty-megaton bomb, more than all the explosives used in all the wars in history. Several states are currently poised to deliver weapons that render those used in Hiroshima and Nagasaki small in comparison. A onemegaton bomb represents the explosive force of approximately seventy Hiroshimas, while a fifteen-megaton bomb is equivalent to a thousand Hiroshimas.

Judge Christopher Weeramantry, in his 1996 International Court of Justice opinion in the case *Legality of the Threat or Use of Nuclear Weapons*, emphasized that:

the unprecedented magnitude of its destructive power is only one of the unique features of the bomb. It is unique in its uncontainability in both space and time. It is unique as a source of peril to the human future. It is unique as a source of continuing danger to human health, even long after its use. Its infringement of humanitarian law goes beyond its being a weapon of mass destruction, to reasons which penetrate far deeper into the core of humanitarian law. (ICJ 1996c, 453)

Humanity is challenged as never before; technology continues to slip away from moral guidance, and law chases after common sense. Ambassador Libran Cabactulan, the permanent representative to the United Nations from the Philippines who served as the president of the 2010 Nuclear Non-Proliferation Treaty (NPT) Review Conference, stated:

No amount of legal hairsplitting or operational obfuscation can change the fact that of all the weapons ever conceived by the mind of man, nuclear weapons are inherently indiscriminate, far beyond proportionality, cause unimaginable unnecessary suffering, and are inescapably harmful to the environment. It is a weapon where the notion of control is meaningless and the idea of military necessity is absurd. Nuclear weapons are the apex of man's genius at finding ways to destroy his fellow human beings. (GSI 2012, 3–4)

INTERNATIONAL COURT OF JUSTICE

When the ICJ addressed the legal status of the threat or use of nuclear weapons, members of the “nuclear club” asserted a principled reliance on nuclear weapons. However, the Court's Advisory Opinion held that “the threat or use of nuclear weapons would generally be contrary to the rules of international law applicable to armed conflict, and in particular the principles and rules of humanitarian law,” but could not “conclude definitely whether the threat or use of nuclear weapons would be lawful or unlawful in an extreme circumstance of self-defense, in which the very survival of a state would be at stake” (ICJ 1996a, 266).

In addressing limited military uses of nuclear weapons, the Court quoted the United Kingdom's statement that “in some cases, such as the use of a low yield nuclear weapon against warships on the High Seas or troops in sparsely populated areas, it is possible to envisage a nuclear attack which caused comparatively few civilian casualties” (ICJ 1996a, 261). In response, the Court pointed out that no state had yet demonstrated when even such a limited use would be justifiable or “feasible” (262).

NUCLEAR WEAPONS AND INTERNATIONAL HUMANITARIAN LAW

In the nuclear weapons case, the ICJ stated unequivocally that international humanitarian law and the rules of armed conflict prohibit the use of any weapon that is likely to cause unnecessary suffering to combatants; that is incapable of distinguishing between civilian and military targets; that violates principles protecting neutral states, such as through fallout or nuclear winter; that is not a proportional response to an attack; or that does permanent damage to the environment (ICJ 1996a). Similarly, in the consensus-reached 2010 NPT Review Conference Final Document, over 190 states party to the NPT “express[ed their] deep concern at the catastrophic humanitarian consequences of any use of nuclear weapons, and reaffirm(ed) the need for all states at all times to comply with applicable international law, including international humanitarian law” (UN 2010, 19).

The ICJ’s opinion stated that under no circumstance may states make civilians the object of attack, nor can they use weapons that are incapable of distinguishing between civilian and military targets. Regardless of whether the survival of a state acting in self-defense is at stake, these limitations continue to hold. For this reason, President Judge Bedjaoui stated—in forceful terms—that the Court’s opinion “can in no way be interpreted to mean that it is leaving the door ajar to recognition of the legality of the threat or use of nuclear weapons” (ICJ 1996b, 270). He emphasized his point by stating, “Nuclear weapons, the ultimate evil, destabilize humanitarian law which is the law of the lesser evil. The existence of nuclear weapons is therefore a major challenge to the very existence of humanitarian law” (272).

No formal testimony was presented demonstrating that nuclear weapons can meet the humanitarian law requirements for their use. The president judge, along with several other judges, undertook to point out the illogic of even the most pressing argument for their use, to ensure the survival of a state: “It would ... be quite foolhardy unhesitatingly to set the survival of a State above all other considerations, in particular above the survival of mankind itself.” As the president judge said, “Atomic warfare and humanitarian law therefore appear to be mutually exclusive, the existence of the one automatically implying the non-existence of the other” (ICJ 1996b, 273). In its advisory opinion, the court said, “Methods and means of warfare, which would preclude any distinction between civilian and military targets, or which would result in unnecessary suffering to combatants, are prohibited. In view of the unique characteristics of nuclear weapons, ... the use of such weapons in fact seems scarcely reconcilable with respect for such requirements” (ICJ 1996a, 262).

Discordance between the incompatibility of nuclear weapons with the requirements of humanitarian law, the assertion that there could possibly be instances in which their use could be legal, and international reliance on the doctrine of deterrence compelled the court to seek a resolution: “It is ... important to put an end to this state of affairs: the long-promised complete nuclear disarmament appears to be the most appropriate means of achieving that result.” The requirements of moral coherence and ethical conduct and the need for “international law, and with it the stability of the international order which it is intended to govern,” drive the imperative of nuclear disarmament (ICJ 1996a, 263). Thus the Court unanimously ruled: “There exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control” (ICJ 1996a, 262).

ADDRESSING THE ONGOING PROBLEM

Legal and moral questions continue to loom before the international community. Nine countries with nuclear weapons—the United States, the United Kingdom, Russia, China, France, India, Israel, Pakistan, and North Korea—stand by an enshrined policy of nuclear deterrence, with a reliance on the threat to unleash horrific destruction on vast numbers of innocent people as well as the environment, ending its viability for civilization.

Deterrence proponents claim that nuclear weapons are not so much instruments for the waging of war as political instruments “intended to prevent war by depriving it of any possible rationale” (Burroughs 1997, 133). They argue from the position of mutually assured destruction, the idea that a nuclear war would be so destructive to the participants that the very survival of civilization would be at risk. At the same time, they attempt to argue that the possession of such weapons ensures the survival of civilization. No other weapons system is designed in this way, never to be used—where the threat of use is the primary method by which the weapons are used. This is incoherent and morally fractured.

If the Biological Weapons Convention had universally banned biological weapons but allowed nine countries to use the plague as a weapon, ostensibly to maintain international peace and security, it would have been obviously impractical and morally unacceptable. Human civilization has recognized that the plague is an immoral and illegal weapon because of its indiscriminate effects no matter who might use it. Nuclear weapons are far more dangerous. It is

clear that deterrence is designed to threaten massive destruction, which would most certainly violate numerous principles of humanitarian law.

More fundamentally, these weapons strike at generations yet unborn. The intergenerational genetic effects of high levels of radiation have been observed in places like Kazakhstan, where the former Soviet Semipalatinsk testing site is located; among the Japanese hibakusha (survivors of the bombings on Hiroshima and Nagasaki); and among Pacific peoples from the islands in range of the 1960s tests.

Even in the instance of retaliation, the moral absurdity remains. As Mexico's Ambassador Sergio González Gálvez told the International Court of Justice, "Torture is not a permissible response to torture. Nor is mass rape acceptable retaliation for mass rape. Just as unacceptable is retaliatory deterrence—'You have burnt my city, I will burn yours'" (ICJ 1995b, 51).

Professor Eric David, on behalf of the Solomon Islands, stated:

If the dispatch of a nuclear weapon causes a million deaths, retaliation with another nuclear weapon which will also cause a million deaths will perhaps protect the sovereignty of the state suffering the first strike, and will perhaps satisfy the victim's desire for revenge, but it will not satisfy humanitarian law, which will have been breached not once but twice; and two wrongs do not make a right. (ICJ 1995d, 49)

NUCLEAR WEAPONS AND POTENTIAL FOR DISASTER

The ethics of nuclear weapons must be tied to the proportionality and indiscriminate nature of their effects. The effects of nuclear weapons were clearly enumerated by Judge Weeramantry:

Nuclear weapons

1. cause death and destruction;
2. induce cancers, leukaemia, keloids and related afflictions;
3. cause gastro-intestinal, cardiovascular and related afflictions;
4. continue for decades after their use to induce the health-related problems mentioned above;
5. damage the environmental rights of future generations;
6. cause congenital deformities, mental retardation and genetic damage;
7. carry the potential to cause a nuclear winter;
8. contaminate and destroy the food chain;
9. imperil the ecosystem;

10. produce lethal levels of heat and blast;
11. produce radiation and radioactive fallout;
12. produce a disruptive electromagnetic pulse;
13. produce social disintegration;
14. imperil all civilization;
15. threaten human survival;
16. wreak cultural devastation;
17. span a time range of thousands of years;
18. threaten all life on the planet;
19. irreversibly damage the rights of future generations;
20. exterminate civilian populations;
21. damage neighbouring States;
22. produce psychological stress and fear syndromes

as no other weapons do. (ICJ 1996c, 471–72)

Addressing the International Court of Justice, Takashi Hiraoka, then mayor of Hiroshima, further defined the point as one obscured by the purported legitimacy of war, stating: “History is written by the victors. Thus, the heinous massacre that was Hiroshima has been handed down to us as a perfectly justified act of war. As a result, for 50 years we have never directly confronted the full implications of this horrifying act for the future of the human race” (ICJ 1995c, 23).

In the nuclear age, a few individuals are given just a few minutes to decide whether there will be a future. There have been numerous examples of this scenario throughout nuclear history:

November 9, 1979. Computers at three US military command centers simultaneously picked up over 200 missiles from the Soviet Union headed for the United States. Officials had only minutes to assess what appeared to be a massive, first-strike nuclear attack. As Minuteman missile-launch control centers in the Midwest were readied, National Security Advisor Zbigniew Brzezinski prepared to call President Jimmy Carter, when he was informed that the threat was reassessed at 2,200 missiles, enough to end the United States and, through fallout and nuclear winter, perhaps the entirety of civilization. Just before Brzezinski picked up the phone, he was informed that early-warning radar systems and the satellites designed to detect launches indicated that there was no missile attack at all. Senator Charles Percy had been visiting a defense facility, and an officer, wanting to impress the politician regarding the

seriousness of his mission, had mistakenly put a training tape into the wrong computer.

June 3, 1980. US command posts again indicated a Soviet attack, and again launch crews for Minuteman missiles were given preliminary launch warnings, and bomber aircraft were manned. Computer displays showed two missiles attacking, then none, and then 200. A simple computer chip had malfunctioned.

August 30, 2007. A US B-52 bomber was mistakenly armed with six nuclear warheads and flown for more than three hours across several states. On October 19, 2007, the Department of Defense and the US Air Force released a report that concluded handling standards and procedures had not been followed. Four commanders were relieved of their commands, numerous personnel were disciplined, and, in the wake of this and other incidents, Secretary of the Air Force Michael Wynne and Chief of Staff of the Air Force General T. Michael Moseley resigned.

While US nuclear near misses might be underreported, only a fraction of the errors that occurred in the silos and command posts of the former Soviet Union are known.

September 26, 1983. The Soviet Union's launch detection satellites reported that US Minuteman intercontinental missiles had been launched. Lieutenant Colonel Stanislav Petrov, however, concluded that his satellites had malfunctioned and, on his own authority, prevented a Soviet alert.

January 25, 1995. The Russian government mistook a weather satellite for a nuclear weapon launch from a submarine off the coast of Norway. President Boris Yeltsin said the next day that he had activated his "nuclear football"—a device that allows the Russian president to communicate with his top military advisers and review the crisis in real time.

Recent mishaps should cause continuing concern. Such incidents are not unique to the United States and Russia:

February 3, 2009. The Vanguard, a British Royal Navy nuclear submarine, and Le Triomphant, a French nuclear vessel, collided in the Atlantic Ocean. Both carried nuclear warheads and were on routine patrol. Defense officials said they were "unable to see each other" (BBC 2009).

Even under the best of circumstances, amid good relations between countries, mistakes can and have been made, highlighting the limited time allowed authorities to discern fact from fiction. As President Ronald Reagan admitted, “Six minutes to decide how to respond to a blip on a radar scope and decide whether to unleash Armageddon! How could anyone apply reason at a time like that?” (Reagan 1990, 257).

Security experts in the West often reference South Asia as the most dangerous nuclear fault line, largely because of the instability of Pakistan. Whether they are correct or not, the dangers inherent in the US and Russian ventures are enough to stimulate a vigorous initiative to eliminate nuclear weapons globally.

ETHICAL INVESTMENTS IN A SUSTAINABLE FUTURE

In a world of often-conflicting religions where moral guidance is not effectively and consistently given to guide state policy, especially relating to issues of international security, it is instructional to note how a secular state, Norway, has advanced the moral imperative of sustainability in the interest of present and future generations. For those who believe that contemporary societies have moral and ethical obligations to future generations, what Norway has done presents a fine example and a challenge. Its inclusion of addressing nuclear weapons in this context is noteworthy from an ethical perspective.

Recognizing its responsibility to future generations arising from enormous profits being gained from fossil fuel resources, in the autumn of 2002, the government of Norway appointed a committee, the Graver Committee, to propose ethical guidelines for the Government Petroleum Fund. Its recommendations have been followed and have caused the prohibition of investments in companies directly implicated in the production of nuclear weapons. The Committee’s report in relevant part states:

- The Petroleum Fund is an instrument for ensuring that a reasonable portion of the country’s petroleum wealth benefits future generations. The financial wealth must be managed with a view to generating a sound return in the long term, which is contingent on sustainable development in the economic, environmental and social sense. The Fund’s financial interests should be consolidated by using the Fund’s ownership interests to promote sustainable development.
- The Petroleum Fund should not make investments that entail an unacceptable risk that the Fund is contributing to unethical actions or omissions, such as violations of fundamental humanitarian principles,

gross violations of human rights, gross corruption or severe environmental degradation. (Graver Committee 2003)

Accordingly, the fund implemented the several mechanisms to implement the ethical guidelines which in part include:

- Negative screening of companies from the investment universe that either themselves, or through entities they control, produce weapons that through normal use may violate fundamental humanitarian principles. This includes weapons of indiscriminate effect such as nuclear weapons, land mines and cluster munitions.
- Exclusion of companies from the investment universe where there may be an unacceptable risk of contributing to:

Serious or systematic human rights violations, such as murder, torture, deprivation of liberty, forced labor, the worst forms of child labor, and other child exploitation;

Grave breaches of individual rights in situations of war or conflict;

Severe environmental degradation;

Gross corruption;

Other particularly serious violations of fundamental ethical norms.

CONCLUSION

Nuclear weapons themselves constitute more of a problem than any problem they address. As long as some nations have them and extol their value, others will seek and eventually obtain them, thus increasing daily the risk of proliferation. As long as they exist, the risk that they will be used, by either design, accident, or madness, increases. Any use would be unacceptable. The risk presses people of conscience to action. Steps must immediately be taken to lower nuclear weapons' political currency, stop their spread, reduce their numbers, reduce the risks of their use, and begin a legal, verifiable, universal process leading to their prompt elimination.

How many unlikely events happen every day? The meltdown at Fukushima in 2011, the attacks of September 11, 2001, and the unlikely and rapid end of the

Cold War took most of the world by surprise, changing much in their wake. The consequences of the unexpected assassination of Archduke Ferdinand in Sarajevo, which led so quickly to World War I, must be placed in context and serve as a warning. As historian Eric Hobsbawm recalls, “The international atmosphere seemed calm. No persons had been assassinated at frequent intervals for decades. In principle, nobody even minded a great power leaning heavily on a small troublesome neighbor. Since then some five thousand books have been written to explain the apparently inexplicable: how, within a little more than five weeks of Sarajevo, Europe found itself at war” (Hobsbawm 1989, 323).

At any time, a similarly unexpected catalyst is quite possible. Given that thousands of weapons are poised to be rapidly launched; governments and rogues continually and increasingly practice cyber-interference; religious fanaticism continues to spread; sophisticated criminal organizations continue to grow and thrive; civil wars and wars between developing countries subsume huge swaths of the planet; and dangerous insecurities in the Middle East persist, one must question whether it is ethically acceptable to institutionalize and accept the risks posed by the existence of nuclear weapons. The next time, instead of an “unexpected” mishap producing yet another bloody, broad, and protracted war for the history books, with nuclear weapons in the mix, there may not be any more books written.

Given the potential for accident, mechanical failure, or simple human folly, the notion that nuclear weapons will never be used is a reckless one. Even under the best of circumstances, mistakes can be made.

The Cuban missile crisis took thirteen days to be resolved, to save the planet from nuclear holocaust. How much time will be enough to rectify human or mechanical error? How much time will there be in a crisis between India and Pakistan, or in the event of a computer hacker creating an illusion of attack or a terrorist posing as a state actor? What threat to international security is possibly greater than the threat posed by nuclear weapons themselves? Resting the security of civilization on the certainty that a mistake is impossible, that deterrence cannot fail, is an unacceptable and logically unsustainable risk. It is also arrogant. It is an unstable means of pursuing a brand of security that is, in essence, in the words of the late senator Alan Cranston, “unworthy of civilization.”

The world has become one of nuclear apartheid, in which the means of unimaginable mass destruction are permitted for some, eschewed by most, and

yet envied by others. The rectification of this untenable situation will help build the global cooperation that is needed to address all other global security issues: protecting biodiversity; reversing the depletion of fishing stocks; controlling ocean dumping; preventing ozone depletion; halting global warming; controlling and eliminating terrorism; fighting pandemic diseases; ending the tragedies of crushing poverty and widespread lack of clean drinking water; regulating the financial markets; and addressing crises arising from failed states.

New levels of international cooperation, trust, and law are necessary. This cannot be accomplished in a world where several nations consider their security interests superior to all others, where their claims to weapons of mass annihilation are legitimate for them but not others.

It behooves all who are serious about any of the aforementioned global challenges to actively support the elimination of nuclear weapons and the advancement of the global security order needed to achieve it.

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