

# The Lethality of Nuclear Weapons

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Author's note: Paul Craig Roberts held top security clearances. He has repeatedly warned that a US-Russian nuclear war would wipe out the human race, along with all other complex forms of life. As a scientist with expert knowledge, I wish to echo and explain his warning.

## The Lethality of Nuclear Weapons

Steven Starr

Nuclear war has no winner. Beginning in 2006, several of the world's leading climatologists (at Rutgers, UCLA, John Hopkins University, and the University of Colorado-Boulder) published a series of studies that evaluated the long-term environmental consequences of a nuclear war, including baseline scenarios fought with merely 1% of the explosive power in the US and/or Russian launch-ready nuclear arsenals. They concluded that the consequences of even a "small" nuclear war would include catastrophic disruptions of global climate[i] and massive destruction of Earth's protective ozone layer[ii]. These and more recent studies predict that global agriculture would be so negatively affected by such a war, a global famine would result, which would cause up to 2 billion people to starve to death. [iii]

These peer-reviewed studies - which were analyzed by the best scientists in the world and found to be without error - also predict that a war fought with less than half of US or Russian strategic nuclear weapons would destroy the human race.[iv] In other words, a US-Russian nuclear war would create such extreme long-term damage to the global environment that it would leave the Earth uninhabitable for humans and most animal forms of life.

A recent article in the Bulletin of the Atomic Scientists, "Self-assured destruction: The climate impacts of nuclear war",[v] begins by stating:

"A nuclear war between Russia and the United States, even after the arsenal reductions planned under New START, could produce a nuclear winter. Hence, an attack by either side could be suicidal, resulting in self-assured destruction."

In 2009, I wrote an article[vi] for the International Commission on Nuclear Non-proliferation and Disarmament that summarizes the findings of these studies. It explains that nuclear firestorms would produce millions of tons of smoke, which would rise above cloud level and form a global stratospheric smoke layer that would rapidly encircle the Earth. The smoke layer would remain for at least a decade, and it would act to destroy the protective ozone layer (vastly increasing the UV-B reaching Earth[vii]) as well as block warming sunlight, thus creating Ice Age weather conditions that would last 10 years or longer.

Following a US-Russian nuclear war, temperatures in the central US and Eurasia would fall below freezing every day for one to three years; the intense cold would completely eliminate growing seasons for a decade or longer. No crops could be grown, leading to a famine that would kill most humans and large animal populations.

Electromagnetic pulse from high-altitude nuclear detonations would destroy the integrated circuits in all modern electronic devices[viii], including those in commercial nuclear power plants. Every nuclear reactor would almost instantly meltdown; every nuclear spent fuel pool (which contain many times more radioactivity than found in the reactors) would boil-off, releasing vast amounts of long-lived radioactivity. The fallout would make most of the US and Europe uninhabitable. Of course, the survivors of the nuclear war would be starving to death anyway.

Once nuclear weapons were introduced into a US-Russian conflict, there would be little chance that a nuclear holocaust could be avoided. Theories of “limited nuclear war” and “nuclear de-escalation” are unrealistic.[ix] In 2010 the Bush administration modified US strategic doctrine from a retaliatory role to permit preemptive nuclear attack, and Counterforce doctrine[x] - used by both the US and Russian military - emphasizes the need for preemptive strikes once nuclear war begins. Both sides would be under immense pressure to launch a preemptive nuclear first-strike once military hostilities had commenced, especially if nuclear weapons had already been used on the battlefield.

Both the US and Russia each have 400 to 500 launch-ready ballistic missiles armed with a total of at least 1800 strategic nuclear warheads,[xi] which can be launched with only a few minutes warning.[xii] Both the US and Russian Presidents are accompanied 24/7 by military officers carrying a “nuclear briefcase”, which allows them to transmit the permission order to launch in a matter of seconds.

Yet top political leaders and policymakers of both the US and Russia seem to be unaware that their launch-ready nuclear weapons represent a self-destruct mechanism for the human race. For example, in 2010, I was able to publicly question the chief negotiators of the New START treaty, Russian Ambassador Anatoly Antonov and (then) US Assistant Secretary of State, Rose Gottemoeller, during their joint briefing at the UN (during the Non-Proliferation Treaty Review Conference). I asked them if they were familiar with the recent peer-reviewed studies that predicted the detonation of less than 1% of the explosive power contained in the operational and deployed U.S. and Russian nuclear forces would cause catastrophic changes in the global climate, and that a nuclear war fought with their strategic nuclear weapons would kill most people on Earth. They both answered “no.”

More recently, on April 20, 2014, I asked the same question and received the same answer from the US officials sent to brief representatives of the NGOs at the Non-Proliferation Treaty Preparatory Committee meeting at the UN. None of the US officials at the briefing were aware of the studies. Those present included top officials of the National Security Council.

It is frightening that President Obama and his administration appear unaware that the world’s leading scientists have for years predicted that a nuclear war fought with the US and/or Russian strategic nuclear arsenal means the end of human history. Do they not know of the existential threat these arsenals pose to the human race . . . or do they choose to remain silent because this fact doesn’t fit into their official narratives? We hear only about terrorist threats that could destroy a city with an atomic bomb, while the threat of human extinction from nuclear war is never mentioned - even when the US and Russia are each running huge nuclear war games in preparation for a US-Russian war.

Even more frightening is the fact that the neocons running US foreign policy believe that the US has “nuclear primacy” over Russia; that is, the US could successfully launch a nuclear sneak attack against Russian (and Chinese) nuclear forces and completely destroy them. This theory was articulated in 2006 in “The Rise of U.S. Nuclear Primacy”, which was published in Foreign Affairs by the Council on Foreign Relations.[xiii] By concluding that the Russians and Chinese would be unable to retaliate, or if some small part of their forces remained, would not risk a second US attack by retaliating, the article invites nuclear war.

Colonel Valery Yarynich (who was in charge of security of the Soviet/Russian nuclear command and control systems for 7 years) asked me to help him write a rebuttal, which was titled “Nuclear Primacy is a Fallacy”. [xiv] Colonel Yarynich, who was on the Soviet General Staff and did war planning for the USSR, concluded that the “Primacy” article used faulty methodology and erroneous assumptions, thus invalidating its conclusions. My contribution lay in my knowledge of the recently published (in 2006) studies, which predicted even a “successful” nuclear first-strike, which destroyed 100% of the opposing sides nuclear weapons, would cause the citizens of the side that “won” the nuclear war to perish from nuclear famine, just as would the rest of humanity.

Although the nuclear primacy article created quite a backlash in Russia, leading to a public speech by the Russian Foreign Minister, the story was essentially not covered in the US press. We were unable to get our rebuttal published by US media. The question remains as to whether the US nuclear primacy asserted in the article has been accepted as a fact by the US political and military establishment. Such acceptance would explain the recklessness of US policy toward Russia and China.

Thus we find ourselves in a situation in which those who are in charge of our nuclear arsenal seem not to understand that they can end human history if they choose to push the button. Most of the American public also remains completely unaware of this deadly threat. The uninformed are leading the uninformed toward the abyss of extinction.

US public schools have not taught students about nuclear weapons for more than 20 years. The last time nuclear war was discussed or debated in a US Presidential election was sometime in the last century. Thus, most people do not know that a single strategic nuclear weapon can easily ignite a massive firestorm over 100 square miles, and that the US and Russia each have many thousands of these weapons ready for immediate use.

Meanwhile, neoconservative ideology has kept the US at war during the entire 21st century. It has led to the expansion of US/NATO forces to the very borders of Russia, a huge mistake that has consequently revived the Cold War. A hallmark of neoconservatism is that America is the “indispensable nation”, as evidenced by the neoconservative belief in “American exceptionalism”, which essentially asserts that Americans are superior to all other peoples, that American interests and values should reign supreme in the world.

At his West Point speech on May 28, President Obama said, “I believe in American exceptionalism with every fiber of my being.” Obama stated his bottom line is that “America must always lead on the world stage,” and “the backbone of that leadership always will be the military.” American exceptionalism based on might, not diplomacy, on hard power, not soft, is precisely the hubris and arrogance that could lead to the termination of human life. Washington’s determination to prevent the rise of Russia and China, as set out in the Brzezinski and Wolfowitz doctrines, is a recipe for nuclear war.

The need is dire for the president of the US, Russia, or China to state in a highly public forum that the existence of nuclear weapons creates the possibility of their use and that their use in war would likely mean human extinction. As nuclear war has no winners, the weapons should be banned and destroyed before they destroy all of us.

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The statements are those of the author and do not necessarily reflect the opinions of Physicians for Social Responsibility or the opinions of the University of Missouri and its faculty.

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