

Opening Words for Second Annual Symposium on the Culture of Peace at SUA

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I am happy to be here today to open our meeting, the Second Annual Symposium on the Culture of Peace, and am grateful to Miwa Tsujioka, Yuya Uchida, and the rest of the Student Movement for the Culture of Peace for the invitation. I am also looking forward to our presentations by Sarah Witmer and Denise Duffield and others as we all together think about a world free from nuclear Weapons.

When given the task for opening words, I turned toward some words I had read back when I was a student, written by Physicist Freeman Dyson in his 1984 book "Weapons and Hope." Freeman Dyson, in case you have not heard of him, is one of the few surviving physicists from the WWII era, and served during the World War as part of the British RAF Bomber command in England. His father, George, was active in WWI, and George himself experienced WWII in London while a college-aged young person, and then advised the RAF on their bombing campaigns. After the war, Freeman was a friend of all the major physicists who brought us nuclear weapons, including Albert Einstein, Robert Oppenheimer, John Von Neumann, and others. He lives in Princeton, NJ, where he got to know Helen Caldecott, one of the founders of Physicians for Social Responsibility, and where he worked alongside Einstein at the Princeton Institute for Advanced Study. He also happens to be a long family friend of my wife's family - and even came to our wedding back in the 1990's!

To give a few examples of Freeman's approaches to problems, I would like to describe a few of the things he is most famous for. He invented the field of Quantum Electrodynamics, as well as made major contributions to solid state physics and astrophysics. During the 1960's, Freeman was employed by a group that was studying how to develop a nuclear propelled space ship in what was called Project Orion - which could enable people to sail across the solar system in just hours or days instead of months or years. This project and his time with the RAF brought him into contact with the military brass and the thinkers brought us nuclear weapons, and helped prompt him to write his book "Weapons and Hope."

The book begins by describing how we live in what appear to be two worlds, the world of the "warriors" and the world of the "victims." He describes the warrior world as primarily male-dominated, quantitative, unemotional, while the world of victims is described as one that is dominated by women and children, and that includes survivors of wartime terror. The first world, as Freeman describes it, is one where "they accept the world, with all of its imperfections, as given - their mission is to preserve it and to ameliorate its imperfections as they can, not to rebuild it from the foundations." The modality is to exclude emotion and rhetoric from discussions and concentrate on details that can be reduced to quantitative calculation. The second world, as Freeman describes it, is one of "youth rather than age; who pay more attention to poets than mathematicians." Freeman wondered why it is so easy for the warriors to ignore the second world and concludes that they ignore them because they are unable to play the game according to their rules. He describes Dr. Helen Caldicott as one who the "warriors" are not listening to, even as she

is helping to span these worlds, bringing to her discussion a focus based on solid medical experience and clinic practice and one that poses a public health hazard.

Freeman's book was written in 1984, in the height of the Cold War, and at the time Freeman said that "the time is now ripe for a new public debate which places into question the fundamental objectives of the military policy." His book argues that emotion and rhetoric need to be joined by solid mathematics and logic, and that the combination could move policy makers away from the incremental and mathematical approaches toward one that could "center on the question whether nuclear weapons have a rational military purpose."

Freeman describes in some detail the "Weapons" - with descriptions of the development of fusion super bombs, some the size of ships that could provide millions of times more power than the Hiroshima bomb, and attempts by physicists to brake the development of these "Doomsday devices." In the end, what prevailed after a few decades was the slow rational process within the military and political establishment that determined that these super bombs served no military purpose. The disarmament efforts of activists and politicians were joined by a growing awareness within the military establishment that bombs of 10-50 Megatons were also no longer practical. This caused the nuclear weapons to become smaller, and the total megatonnage of the nuclear powers reduced drastically between 1950s in 1984 when the book was written.

Freeman also quoted some of the voices that attempted to stop these superweapons from inside the establishment of the military. This includes Robert Oppenheimer, who stated when given an award in 1945 for his service at Los Alamos said:

"my pride must be tempered with a profound concern. If atomic bombs are to be added as new weapons to the arsenals of a warring world, or to the arsenals of nations preparing for war, then the time will come when mankind will curse the names of Los Alamos and Hiroshima. The peoples of the world must unite or they will perish."

However, Freeman also cautioned that similar warnings were presented to him and the English in 1939 on the eve of WWII, and the surprise that he and many other Britons felt after the war when civilization was not destroyed. After WWAs Freeman described it, this survival experience misled the survivors or WWII by a "false reading of human history which teaches us that nationalism is still the strongest force in the world - stronger than the Hydrogen bomb and stronger than humanity."

The "Hope" in the book is based on the idea that humans will eventually respond (even if over decades) to arguments that combine rational, rhetorical, moral, political and social factors to make change possible. He finds hope in "the transition from virulent nationalism to a world united" which Oppenheimer, Einstein and others urged in the 1940's and 1950's and which we still hope for in 2019. Bringing persuasive arguments that speak to both worlds - and that combine morality and rhetoric with a solid and rational argument for removing those weapons can accelerate this transition and will eventually an inevitably bring us to a nuclear weapon-free world.

The argument that Freeman makes is not whether we would survive a nuclear war, but that the incalculable harm from those weapons, the lack of certainty of our control of those weapons, and

the inevitable advances in technology that favor defensive technologies will render them obsolete from a practical standpoint, just as the 50+ megaton weapons are obsolete today as they have no military utility. When combined with moral, political and social arguments against nuclear weapons, the impracticality of these devices will inevitably cause them to be removed from arsenals around the world, Freeman Argues, even absent a unified world government.

The secret to enable this transition is hope. Freeman closes his book with a quote from author Sarah Clarirbone Park who said that:

“hope is not the lucky gift of circumstance or disposition, but a virtue like faith and love, to be practiced whether or not we find it easy or natural, because it is necessary to our survival as human beings.”

I hope that all of you in these discussions have a chance to develop new ideas about a nuclear weapon free world, and that we can work together toward this goal, while we also build a deeper and sustained capacity or hope in this change coming.

References

Dyson, Freeman, 1984, Weapons and Hope, HarperCollins:New York.

Dyson, Freeman, 1984, “Reflections: Weapons and Hope,” four-part article published in the *New Yorker*, Feb 6-27, 1984.