Star Wars or World Peace

Star Wars or World Peace

Dan Q. Posin

published in dialogue1:1, pp. 17-22

1986

Star Wars is an ironic science fiction name for President Reagan’s Strategic Defensive Initiative. Stars do not make wars. They are celestial bodies, some of which have planets orbiting around them. It is through the light and warmth emitted by stars — including our own sun — that life exists. But Star Wars is an appropriate term for Reagan’s plan because it characterizes how the juvenile fascination with fanciful mayhem in the heavens can lead influential people to try and emulate that storybook mayhem in real life here on earth.

And what is the Star Wars project? President Reagan tells us it is a defense system against nuclear attack that might be launched by an adversary against U.S. cities and military installations. Nuclear missiles — those which are headed for a country’s heartland and indicate that this is an all-out nuclear war — are called “strategic.” In military parlance, atomic warheads of lesser power are designated “tactical,” to be employed in battlefield confrontations. The President, who appears to be fascinated by “Star Wars” movies and the technological gimmickry they conjure up, has referred to the Soviet Union as an “Evil Empire” and says that the United States must build a strategic defense against that Empire. Formally, this defense system is called “Strategic Defensive Initiative” (SDI). The public and press usage of the phrase Star Wars has become embarrassing and annoying to the administration. In a public relations ploy reminiscent of the rechristening of the MX missile as the “Peacekeeper,” SDI supporters now refer to the system as the “Peace Shield.” But whatever the name, the system is not really a defense against nuclear attack, but rather a provoker of nuclear attack which will lead to all-out nuclear war.

Why would a project, ostensibly designed to prevent nuclear war, instead provoke it? The answer lies in the fact that the Soviet leaders see the situation this way: the U.S. is planning to build a shield against any possible nuclear attack. Once in place, the Americans could launch an attack against the Soviet Union, knowing that if there is anything left of Soviet power to

counter-attack, these missiles would be intercepted by the U.S. shield. However, the Russians, understanding the situation, would not wait for the U.S. to build its shield, and might attack before Star Wars is operational. Thus, the Russians would be provoked into a nuclear attack — a first strike — beating the U.S. to the punch. And, if the U.S. anticipates the Soviet intention of landing the first blow, then the U.S. would attack earlier than it had planned. In this case, the U.S. essentially would provoke itself into a nuclear attack. Thus, one country or the other will be goaded into making a pre-emptive first strike against the other.

Why hasn't such a situation occurred during the last forty years? This is because the two superpowers have treaties deliberately forbidding the building of a defensive shield in order to avoid the temptation of launching a first strike. The lack of a shield for both sides left each vulnerable to nuclear attack, and therefore if one side attacked, the other could retaliate, and mutual destruction would result. In fact, the treaty arrangements leaving both sides thus vulnerable is called "Mutual Assured Destruction" or "MAD." While MAD is not the best of all possible arrangements for keeping peace between the two countries, nevertheless it has kept nuclear peace between them. As risky as MAD is, it is considerably better than the almost certain destabilization that Star Wars will bring with its temptation to strike while feeling safe from counter-strike.

Before examining what other approaches can be taken toward achieving lasting world peace, let us consider how a Star Wars defense is being designed to work. The system envisioned, and already under research and actual trial in part, consists of the following categories:

Laser beams. These are powerful beams of concentrated light. The beams are able to burn through many types of materials, including those of which incoming missiles are constructed. Lasers are effective because of the great amount of energy used to create them and because the waves of light are in step with each other — in-phase, the physicists say. This "in-phase" aspect is what characterizes laser light, and is the reason why the beam remains extremely well-defined, not spread out as light is when issuing from an ordinary flashlight or searchlight.

X-ray lasers. These are of the same nature as the light laser except that here it is x-rays which are in-phase, forming a well-defined beam, much more powerful than the laser-light beam, and capable of wrecking the internal electronics of the incoming missile.

Charged particle beams. These are beams of sub-atomic particles such as the nuclei of hydrogen atoms. Such particles can be accelerated to nearly the speed of light and then can destroy whatever target they are aimed at.

Neutron particle beams. These are beams composed of such particles as neutrons, and can be produced in enormous numbers by nuclear reactors and neutron bombs.

Rail guns. These are machines which can actually hurl streamlined chunks of

iron at very great speeds, although at much less than the speed of light. They destroy incoming missiles simply by hitting them with a terrific impact.

Thousands of these weapons, and others now being devised, would be needed to mount a Star Wars defense. Large numbers of “battle stations” would orbit Earth, all equipped with a variety of Star Wars weaponry. These battle stations would form an integrated sky combat system, ever on duty as part of the nervous system of the entire battle array. The battle stations would attempt to lock on to as many as 8,000 to 10,000 incoming missiles speeding along at some 25,000 miles per hour. The orbiting stations would be assisted by thousands of ground installations employing radars, ground-based laser stations, submarines, firing devices which generate x-ray beams, and the various particle beam devices discussed above.

No defense can be perfect, especially because the incoming missiles would be supplemented by hundreds of thousands of decoys, phony missiles and bombs dispersed across the heavens to lure the defense into wasting its fire power by shooting at the wrong targets. In addition, the incoming missile conglomerate would be with millions of aluminum foil bits to fool the radar systems into believing they have detected a missile or bomb in space and fire at nothing. Such foil, called “chaff,” was successfully used during World War II to deceive radar and now the deception techniques are far more advanced.

To integrate the entire strategic defense system, the U.S. must develop a super system of computers so intricate, so sophisticated that no human genius could write a program for it, nor could anyone even find the errors in any operations program which the computers wrote themselves. Consequently, in setting forth to block the incoming missiles, American defense officials will not know whether the computers can, at the same moment, handle billions of bits of information needed to:

Discover if an attack is under way from the earliest phase.

Calculate the number of missiles involved.

Determine the speed of the missiles.

Determine the projected flight pattern of the missiles and their destination on an individual basis.

Discriminate between genuine nuclear bombs released by the missiles and hundred of thousands of decoys released by the missiles.

Identify chaff released in millions of pieces and ignore the radar reflections from the chaff.

Transmit orders to the battle stations, informing them about which flying objects to attack.

Monitor and constantly update defensive successes and failures.

Engage in constant revision of the strategy of defense.

The defensive computer system must do all this without error and without breakdown. And it must be continually successful in all of the above objectives, as time passes and the crisis unfolds. A breakdown or a failure to function properly can mean that great numbers of warheads will pierce the defensive shield, strike their targets, and kill millions of people.

Dr. Robert Bowman, head of the Air Force's advanced space program from 1976 to 1978, makes these points concerning various proposals for weapons to be used in space defensive systems and their manner of use. [Dr. Bowman holds a doctorate in Aeronautics and Nuclear Engineering. -J.W.] He writes that:

All Star Wars proposals have staggering technical problems.

All would probably cost about $1 trillion.

All violate one or more existing treaties between the United States and the Soviet Union.

All of the systems are extremely vulnerable.

All are subject to an array of countermeasures.

All could be made impotent by alternative offensive missiles, such as low flying cruise missiles.

All could be overwhelmed by a large number of offensive missiles.

All, if they worked, would be more effective as part of a first strike than against a first strike.

And most importantly, notes Dr. Bowman, all of the Star Wars systems proposed would be extremely destabilizing, probably triggering the nuclear war both sides are trying to prevent.

As I have indicated, the Star Wars project, the Strategic Defense Initiative, is not really a defense system, but rather one likely to bring about nuclear war. The initials should be properly known as SPI, Strategic Provocative Initiative. This is the overwhelming opinion of the scientific community and, perhaps surprisingly, of even a significant segment of the military establishment,

James Schlesinger, former Secretary of Defense, has called Star Wars half P.T. Barnum and half Buck Rogers. Dr. Herbert York, Science Advisor to President Eisenhower regards the Star Wars project as unworkable and a promoter of a new arms race.

Seven hundred scientists and fifty-four Nobel Prize winners have warned that Star Wars will destabilize U.S.-Soviet relations and lead to an accelerated arms race. General David Jones, former Chairman of the Joint Chiefs of Staff, expressed the view that Star Wars is unworkable and an impediment to world peace. Even Defense Secretary Caspar Weinberger says that the most frightening prospects for America would be "the development of an effective Soviet defense" such as Star Wars. If, as President Reagan asserts, Star Wars would

end the threat of nuclear war, why would a Russian system be one of the most frightening prospects? Because the American nuclear strategists would think that the Russians, having assured their own protection with an effective missile defense, were readying a first strike against the U.S., while not risking unacceptable damage to themselves.

So, since for the U.S., the building of a near-perfect defense by the Russians would be a perilous situation, how do the Russians feel now that the Reagan administration has unleashed billions of dollars for research and testing in a Star Wars system? After all, only one country — the United States — has used nuclear bombs on people….

As things stand, the U.S. is launched on its Star Wars project and the Russians must be preparing to go all-out in manufacturing nuclear bombs by the tens of thousands in order to be able to overwhelm the American Star Wars shield. To manufacture nuclear bombs by the thousands is not so difficult these days. Such bombs can now be made on practically an assembly line basis. Certainly, it is far easier to make more bombs than to create a perfect or near-perfect defensive shield.

Here is an assortment of nuclear bombs, all of which are rather easily manufactured, the Soviet Union would employ to defeat Star Wars.

The Uranium Bomb. In this weapon, a special type of uranium, Uranium 235, is used. Particles called neutrons strike the uranium nuclei, causing them to burst apart in the process called fission. During fission, several neutrons are released by the uranium nuclei. This triggers a chain reaction of bursts accompanied by a massive generation of heat resulting in an atomic explosion with its release of powerful radiation.

The Plutonium Bomb. Plutonium may be used in a manner similar to Uranium 235 for the manufacture of a nuclear bomb. A plutonium bomb explosion is much more powerful than the uranium bomb explosion. Today, most fission bombs used in very high energy explosions use plutonium rather than uranium. Plutonium, besides being super-energetic in fission, is also a very toxic, poisonous material and highly carcinogenic.

The Hydrogen Bomb. In this bomb, essentially two explosions occur. First, a plutonium bomb is set off, which then “ignites” two types of hydrogen particles — deuterium and tritium. These two hydrogen particles fuse, a process in which some of their mass converts to energy such as gamma rays. The violent release of such energy promotes the second explosion. The hydrogen explosion can be made very powerful by simply adding more of the two types of hydrogen. The hydrogen explosion can dwarf the plutonium. A plutonium bomb explosion is often referred to by the military as the “match” or “trigger” that sets off the hydrogen explosion.

The Neutron Bomb. This bomb is essentially a hydrogen bomb, but one of special design. While depressing somewhat the explosive power of the hydrogen bomb, the neutron warhead produces very fast, energetic neutrons that fly out to great

distances and can kill all living things on their path.

The Fission-Fusion-Fission Bomb. This type of bomb, called the 3F bomb, has enormous explosive power. In fact, it generates three explosions: plutonium, hydrogen, and Uranium 238. In the 3F bomb, neutrons generated during the hydrogen fusion process, strike the Uranium 238, which instantly fissions causing the third explosion.

The Cobalt Bomb or Loaded Bomb. In this type of bomb, basically any of the above five, there is an extra destructive effect added: material, for example, cobalt, is loaded into the bomb. The cobalt does not produce a stronger explosion, but is there for a special purpose. In a nuclear explosion, cobalt becomes highly radioactive, vaporizes, and increases the radiation power of the atomic mushroom cloud. Cobalt's radiation is that of the powerful gamma rays. When the cobalt vapor settles as fall-out, it continues to emit radioactive poisons for a long time. The half-life of this cobalt is five years, which means that after five years the radiation has lost half of its strength, and after five more years, it is down to half of the half, etc. ordinary cobalt is not radioactive. It is its exposure to the neutron bombardment within the exploding bomb that makes it emit the gamma radiation.

Other mass-killing techniques are constantly being devised by the superpowers.

Let's look ahead a few years and suppose that the U.S. has constructed a credible Star Wars shield. The Russians launch their missiles in order to beat the U.S. to the first strike. Assume that some 10,000 warheads are on their way to the United States, most of them programmed for specific targets. Along with these come the swarms of decoys released by the opening missiles and the clouds of chaff. The U.S. Star Wars defense goes into action, shooting down whatever is possible and sensible to shoot down. Assume the U.S. shoots down 90% of the incoming nuclear warheads ? an outstanding kill ratio. Only 10% get through. What impact is that? One thousand nuclear bombs strike the United States. All of the nation's large and middle-sized cities, its military installations, and its infrastructure are devastated, virtually demolishing the country. The thermonuclear blasts produce a raging firestorm across the land, generating vast black clouds of soot that rise and spread out, forming a dense blanket, shutting out the sun's warmth. This effect last decades, possibly bringing on a "nuclear winter," with plant growth stinted and other living things perishing.

pages 20 and 21, combined; click for larger image

In a kind of intuitive moment, Robert Frost once wrote:

Some say the world will end in fire.

Some say in ice.

From what I've tasted of desire

I hold with those who favor fire.

But if the world must perish twice.

Then from what I've learned of hate

I think that ice is also great?

And would suffice.

In the mad scenario recited above, which may well find realization, the world would have its fire and ice. Up to 100 million burned or frozen corpses would litter the devastated landscape, U.S. Russian, and others. The circulation of the atmosphere would take the radioactive black clouds over most of the northern hemisphere. The clouds would be dense, the radioactivity powerful, for today's bombs are now 20 to 4,000 times more powerful than the bomb dropped by the U.S. over Hiroshima.

What if the U.S. were able to shoot down 98% of the incoming missiles? Then two hundred would still get through and hit their targets. But even this is a greater amount than the number of large and middle-sized cities in the United States. What if the Russians do wait until the U.S. has the capability of shooting down 98% of the incoming warheads? Would they wait? And risk suffering a first strike themselves? Would we wait? And what would happen if the Russians launched 50,000 nuclear missiles?

The madness and stupidity of Star Wars seems to be an awful temptation for governments. The United State's NATO allies are anxiously awaiting lucrative defense contracts related to the creation of Star Wars. Less powerful countries are also eager to join the mindless race for nuclear devastation.

To counter this we must re-focus our efforts and engage in serious arms control negotiations, not in arms decontrol. There must be more, much more, effort at stopping the production and testing of armaments: and there must be a wholesale, all-out effort at reducing the stockpiles of nuclear weapons, not increasing the stockpiles, which only leads to suspicion of each country's intentions.

It is not only up to the politicians and their military and science advisors to work out arms agreements. Every individual must do what he or she can to spread the word of peace, generate a chain reaction of peace, work unceasingly for the cause. It is paramount that we engage in new modes of thinking based on the principle of One World. Political leaders have no special gift of insight into these issues, but must be encouraged by the grassroots to have the faith and courage to deal with the arms race from the perspective of One World, for it will be one world or none. The British statesman Edmund Burke once wrote "All that is necessary for evil to triumph is for enough good people to do nothing." To save ourselves and our planet, we must all find ways to respond appropriately to the insanity of the arms race. In the Old Testament, the God of Israel puts the moral responsibility square on our shoulders:

I have given thee life or death

Blessing or cursing

Therefore choose life

So that thou and thy seed may live.

Dan Q. Posin is a professor of Physics and Interdisciplinary Science and of Astronomy at San Francisco State University. Prof. Posin is the author of over 100 science publications. His essay is based on a talk given at the San Francisco Bahá'í Center on June 9, 1985.

Letter to the editor: "Star Wars"

from dialogue Vol. 1, No. 2, p. 5 (1986)

I was delighted to read your feature article exposing the truth about Star Wars in the first issue of Dialogue, and I hope it is a sample of what we can look forward to in future issues.

I recently attended a United Nations Association (UNA) briefing on Star Wars which was conducted by Admiral Caroll of the Center for Defense Information. He presented us with the facts on SDI and then there was an opportunity for questions.

Admiral Caroll answered two very important questions which your readers may be interested in:

Q. Why don’t the American people know the true facts on SDI?

A. Because the administration has spent billions of dollars feeding the media with their viewpoint. For example, when the Soviet Union declared a moratorium on nuclear testing, this happened, and the press came out right on the administration’s stance. This administration is the best manager of the media — selling itself to the press and TV.

Q. What can we do about Star Wars?

A. The only way to make changes is to make peace a politically significant issue; make it a significant movement. An impetus has to come from the people that they will only elect and vote for representatives who stand for peace.

Shiva Tavana
United Nations Representative for the Bahá'ís of the United States
New York, New York

click for larger image

click for larger image

click for larger image

click for larger image

click for larger image

click for larger image

Letter to the editor, from dialogue 1:2, p. 5 (1986)

click for larger image

METADATA

Views5819 views since posted 2013-01-16; last edit 2013-01-16 UTC;

previous at archive.org.../posin_star_wars_peace
Language
English
Permission
publisher
History
Typed 2012-06 by Bobbi Lyons; Formatted 2013-01-16 by Jonah Winters.
Share

Shortlink: bahai-library.com/3990
Citation: ris/3990

select Collection:
Archives
Articles
Articles-unpublished
Audio
Bibliographies
BIC
Biographies
Books
Chronologies
Compilations
Compilations-NSA
Compilations-personal
Documents
East-asia
Encyclopedia
Essays
Etc
Excerpts
Fiction
Glossaries
Guardian
Histories
Introductory
Letters
Maps
Music
Newspapers
NSA-documents
NSA-letters
Personal

— Star Wars or World Peace (Used by permission of the curator)