ACCIDENTAL NUCLEAR WAR
DANGERS OF THE
"STAR WARS" PROPOSAL

by
Dean Babst, Robert Aldridge
and David Krieger

Booklet 7
WAGING PEACE SERIES

Nuclear Age Peace Foundation
WAGING PEACE SERIES

We wish to introduce you to the Waging Peace Series. As far as is known, the term "Waging Peace" originated with Warren Wells, late husband of Ethel Wells of Santa Barbara, in a letter to President Eisenhower. It was a long-standing practice of Mr. Wells to keep in close touch with key national figures and give them his views on peace issues as well as other vital matters. This series is dedicated both as a memorial to him and in gratitude to Mrs. Wells for her continued efforts in this cause.

Just as peace is more than the absence of war, waging peace is more than supporting arms reductions. In addition, it embraces positive steps toward genuine harmony. In this series the Foundation will distribute short booklets stressing ideas for attaining peace. Some publications will be scholarly, others more popular in style—most will combine elements of both. Concepts expressed will include views of many authorities, and will not necessarily be those of the Foundation.

Suggestions for topics and your reactions to this issue are welcome. Quantity lots are available at minimal charge from the Nuclear Age Peace Foundation.

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INTRODUCTION

The Nuclear Age Peace Foundation maintains a strong commitment to studying and alerting the public to dangers inherent in accidental or unintentional nuclear war. Booklet 3 in the Waging Peace Series focuses on the topic, "Preventing Accidental Nuclear War," The booklet provides an overview of the problems of an unintentionally triggered nuclear war, and suggests possible solutions. Copies of the booklet are available from the Foundation.

Dean Babst is the Coordinator of Accidental War Studies at the Foundation. He keeps a growing number of researchers in North America, Europe and the Pacific informed of accidental war issues through the preparation of an Accidental War Prevention Newsletter which the Foundation publishes and distributes. He also prepares Accidental War Fact Sheets, and is currently at work editing a volume on computer modeling of accidental nuclear war dangers.

It is becoming increasingly understood that nuclear war may be more likely to occur by accident than intention. Despite this understanding, however, the dangers of accidental nuclear war are not as yet being fully evaluated in relation to strategic decisions such as the "Star Wars" Space Defense Initiative.

This issue of Waging Peace suggests that there would be serious accidental war dangers from the implementation of "Star Wars." This adds one further important reason why "Star Wars" should not be pursued. Of course, we would all like to be rid of the threat of nuclear weapons, but we must exercise care not to create even greater dangers in our attempts to solve our problems (see appendix). The authors believe that "Star Wars" will, in fact, increase the danger of accidental nuclear war. Without doubt, it will also increase the nuclear arms race, both in space and on the ground.
At the Nuclear Age Peace Foundation we believe in inquiry, evaluation and communication on the major issues of peace in the nuclear age. We encourage you to evaluate for yourselves the dangers suggested in this article. If, in fact, the development of “Star Wars” would increase the risk of accidental nuclear war, the Space Defense Initiative should be set aside, and more promising approaches to achieving security in the nuclear age should be pursued.

As always, we welcome your responses to this issue, and encourage you to Wage Peace!

David Krieger
President
Nuclear Age Peace Foundation

ACCIDENTAL NUCLEAR WAR DANGERS OF THE “STAR WARS” PROPOSAL

The United States plans to spend $26 billion by 1989 on the “Star Wars” Strategic Defense Initiative (SDI). Most of that amount is slated for research leading to development of directed energy and kinetic energy weapons and sensors. [1] No money has been requested to assess how these various weapons might increase the danger of accidental nuclear war—a truly shortsighted omission.

Some types of assessment might be done fairly quickly and inexpensively. For example, the computerized mathematical model developed by Drs. Crissey, Sennott and Wallace demonstrates a reasonable approach. [2] Their simulation considers the number of false alarms, the time needed to clear them, and the time available during an international crisis. Other factors should also be introduced, such as the possibility of space debris colliding with critical satellites, and the nervousness of high military commanders when facing a knockout first strike capability.

SATELLITE INTERFERENCE

Since the SDI weapons being considered to destroy ballistic missiles in flight could also be used against satellites, what would happen if a crucial satellite went blind during a tense international crisis and there was little time to assess what happened? Would military leaders assume that the satellite was struck by space junk, or would they leap to the conclusion that they were under attack and start launching missiles?

Space is becoming an orbiting junk yard. There are currently some 5,000 known human-made orbiting objects and there could be tens of millions of undetectable fragments as well. Since these objects whip around the earth
at six miles per second, even a tiny fragment colliding with a satellite could be devastating. In 1983, three spacecraft were hit. A window of the Soviet Salyut 7 space station was struck and cratered, and the shuttle Challenger suffered similar damage. An Indian communication satellite was struck by an eight-inch space object. [3] As the quantity of space junk increases we can look forward to more frequent and more severe collisions.

Another connection of Star Wars weapons with satellites is closely related to collisions. If the United States, in response to an alert, erroneously fired a laser beam at a Soviet military communications satellite, such an action could be perceived as the prelude to an attack. [4] Misinterpretation of such an accidental event involving SDI weapons could then escalate to use of nuclear weapons.

COMPUTER DECISIONS

The potential for accidental nuclear war will be further aggravated by the need for a large, complex and extremely fast computer network to run the Star Wars system. Decision time for activating the first layer of the proposed SDI defense would be less than three minutes. Defense Secretary Caspar Weinberger highlighted the problem in an interview with *Omni* magazine [5]:

**WEINBERGER**—The goal would be to try it against thousands of missiles, including missiles that carry ten independent warheads, and missiles whose warheads can change direction. It is, I am told, essentially a problem of very, very large and extraordinary rapid computer capability. We must develop that to the point where we can identify, track and destroy several thousand targets in a very, very short space of time.

**OMNI**—You are talking about a total battle time of as little as one hundred twenty or two hundred seconds?

**WEINBERGER**—It is very short. It is a very big task . . .

Since Star Wars will require decisions within seconds, completely autonomous computer control is a foregone conclusion. There will be no time for human beings to screen out false alarms. Congressional testimony has illustrated that destroying Soviet missiles while their rocket motors are still burning will require a decision so fast that it would have to be automated—there would be no time for White House approval. [6] These computers destined to activate “defensive” Star Wars weapons are likely to be the same systems which will alert strategic nuclear missiles to launching readiness.

Secretary Weinberger is proposing a far more sophisticated computer system when the Pentagon has not been able to make existing computers function reliably. The multi-billion dollar strategic missile warning computer network is the foundation on which SDI will be built. Consider the following examples of potential disasters and systems failures caused by unanticipated events:

—During an 18-month period in 1979-80 the U.S. had 147 false alarms in its strategic warning system. Two lasted three minutes, and one lasted a full six minutes [7]. In these cases, however, there were people in the loop to rectify the situation. With automated systems, and decreasing decision time, however, six minutes could be too much.

—During 1981, 1982 and 1983 there were 186, 218 and 255 false alarms, respectively, in the U.S. strategic warning system. [8] We can expect false alarms to continue increasing as weapons systems become more complex and automated. In addition, we need to ponder the danger of other nations launching to a false alarm.

—In 1984 the nation’s backup warning system, outside of Washington D.C., failed during a routine test and it took officers 34 minutes to notify headquarters of the breakdown. [9] This incident became publicly known because a CBS news team was doing a story on the system at the time.
There have been other major systems failures of which the Three Mile Island accident is one. Also note the major power blackouts in New York City, the Northeastern U.S. and Ontario—after experts had dismissed the possibility. During the Falklands war, the British Ship Sheffield was sunk by the Argentines with a French-made Exocet missile because the ship’s computers were programmed to ignore an ally’s missile. [10]

General Bennie Davis, U.S. Strategic Air Commander, believes that a completely automated decision-making process is very dangerous. He opposes a launch-on-warning policy (which an automated launch decision would be) and prefers to wait until some enemy warheads reach the U.S. before firing our missiles. [11] His concern is contrary to the direction in which we are headed, where a nervous twitch of the finger, or an electron taking the wrong path on a chip, could launch us into World War III.

**COMPUTER SECURITY**

In the movie War Games, World War III was almost started by a teenage computer hacker breaking into the NORAD missile warning system. Becoming concerned, the Defense Department attempted a computer security study. But defense officials found they don’t even know how many computers are used. They surveyed the 17,000 known computers and more than two-thirds of the cognizant officers, some in the most sensitive outposts, failed to return the survey form. [12]

Robert Brotzman, director of the Pentagon’s Department of Computer Security, reluctantly concluded: “We don’t have anything that isn’t vulnerable to attack from a retarded 16-year-old.” [13] While there is a security dilemma now, how will it be handled in a larger and far more complex Star Wars system? How secure are other nations’ computers?

**FIRST STRIKE NERVOUSNESS**

Defense against ballistic missiles, which is what Star Wars is all about, is an important element of a disarming first strike capability. [14] To be truly disarming, the initial assault would have to be followed-up by interception of surviving enemy missiles which are launched in retaliation. Star Wars actually appears more credible in this less demanding role than in the advertised task of protecting the entire country against a full scale Soviet assault. But supplying this important element of a first strike capability will put the nuclear standoff on a short fuse during an international crisis because the opponent would recognize a military advantage to using his missiles before they are destroyed.

As warning time shrinks and nations become more jittery, decision-makers could misread the opponent’s actions, or reactions, and move rapidly to the higher states of alert leading to nuclear war. Such an escalation could be triggered by a mistake similar to the accidental firing of a Soviet missile over Norway in December 1984. [15] During that incident the U.S. and USSR used the hotline. What will happen when there just isn’t enough time to do even that?

Star Wars weapons, such as electromagnetic rail guns and killer lasers, are extremely sophisticated and their state of development after a $26 billion exercise will be uncertain. National leaders will be increasingly anxious about the other side having perfected this final element of a first strike advantage. Such uncertainty in crisis situations heightens the possibility of one side launching a preemptive strike because they believe the other side may be about to strike. In this manner, Star Wars weapons may increase the danger of an accidental nuclear war by making both sides anxious that nuclear weapons are apt to be fired.

**WHY WAS STAR WARS PROPOSED?**

In light of the seriously increased danger of accidental
nuclear war resulting from the Star Wars scheme, it is of interest to inquire why the proposal was put forth in the first place. The simple answer might be that concern with accidental nuclear war has not been perceived as a problem by the Reagan administration or by the public generally. There has been a tendency in government and public consideration of strategic issues to assume that the onset of a nuclear war would be by an intentional decision rather than by accident. No matter how mistaken this view may be, the fact that it exists has inhibited a serious examination of the risks of accidental nuclear war. This includes the risks inherent in development of Star Wars as well as other proposed strategic weapons and defense systems.

In addition to the generally low level of concern over the dangers of accidental nuclear war, there is also a great desire on the part of the public to find an answer to the current dilemma of a nuclear armed world. Star Wars offers the promise of protection from the nightmare of nuclear war. It provides the illusion that we can achieve safety from the horror of nuclear attack. Star Wars allows the public (and perhaps Mr. Reagan personally) to believe what it would like to believe—that we can develop the technological capability to live under a shield safe from nuclear attack.

Star Wars, in short, provides hope for a future free of nuclear threat. No matter how unlikely it is to be successful, it provides that most important of ingredients for the human psyche in an age when total annihilation is possible—hope. Our desire to believe that there is a way out of this dilemma, however, should not blind us to careful analysis of the implication of any course of action, including, of course, that of the Star Wars proposal. That analysis must include the implications of Star Wars for initiating an accidental nuclear war.

Not to be overlooked in examining the reasons for the Star Wars proposal are the enormous profits which will flow to the defense industry. Already $26 billion is planned for research and development of Star Wars over the next few years, and that would be just the beginning should a decision ever be made to operationalize the system. With these enormous expenditures and the resulting anticipated profits to the defense industry, the system is sure to have industry support regardless of its strategic validity. The proposal thus speaks to the defense industry, informing them that the government intends to consider their welfare for many years to come. In the meantime, the national deficit, the budget deficit and the foreign trade deficit continue to mount, undermining the economic security of the country.

The Star Wars proposal was also put forward as a message to the Soviet Union. The message would say something to this effect: We are willing to keep the arms race alive and healthy, and run whatever risks are involved in increasing the threat to you of our developing a first strike capability. The Soviets have always responded to this sort of message by demonstrating that they are willing to keep pace with us and continue the nuclear arms race. They have responded specifically to the Star Wars proposal by stating that there can be no serious arms negotiations while we are pursuing such a system, and that they would develop new offensive weapons to counter it. In considering how the Star Wars proposal is viewed by the Soviet Union, we must understand that for them our development of an effective defense would put them at our mercy, and they are no more willing to accept that situation than we would be if the shoe were on the other foot.

Even though Mr. Reagan has offered to share Star Wars technology with the Soviet Union once it is completed, this cannot be very reassuring to the Soviets since they would then be vulnerable to us, and they have no guarantee that any successor to Mr. Reagan would uphold his offer. Looked at from a Soviet perspective, they would be foolish to allow their national security to rest upon the good will and generosity of some future American president. If we truly wanted to show good faith with the Soviet Union on sharing the benefits of Star Wars, we would offer to initiate a joint project with them on space-based missile defense systems so
that they would be able to share in the information from the outset. This should relieve concern on their part about our having first strike intentions. Even more important, it would allow both sides to study jointly the accidental nuclear war implications of developing a Star Wars defense.

Thus, we may conclude that the Star Wars proposal offers hope to the American public, but it is a false hope that actually increases the danger of a nuclear war beginning accidentally; it offers profits which are very real to the defense industry, but at the expense of using these funds in more productive ways to strengthen our national economy; and it offers the Soviets reason to believe that we are willing to commit to developing a means of making ourselves invulnerable to their threat and thus place them at our mercy.

STAR WARS, OTHER NATIONS AND TERRORISTS

The Star Wars proposal also sends a message to other nations and to terrorists. It informs them that the United States is committed to finding a defense against missile attack rather than to the reduction and elimination of nuclear arsenals. The message is read loud and clear in what we do and what we spend money on rather than in our statements. We can claim we want arms control and disarmament in public statements, but these statements do not ring true if we fail to show by our actions that we are capable of achieving serious arms control. In Article VI of the Nuclear Non-Proliferation Treaty (NPT), we solemnly promised, along with the Soviet Union, to pursue good faith negotiations toward achieving general and complete disarmament under international control. [16] That treaty was signed in 1968 and entered into force in 1970, and few nations today believe that either the United States or the Soviet Union has abided by its treaty commitment in Article VI. This has led to a lessening of the bonds of commitment of nations that agreed to forego the development of nuclear weapons in the NPT.

By their joint participation in the nuclear arms race, the latest upward leg of which promises to be triggered by the development of Star Wars, the superpowers have set the example for the rest of the world that nuclear weapons are prestigious and desirable. The cavalier attitude of both superpowers toward nuclear weapons development is apt to result in a breakdown of the NPT, and in an increased number of nuclear weapons states and perhaps even nuclear armed terrorists. By increasing the probability of more nuclear weapons powers in the future, the two superpowers are indirectly increasing the probability of nuclear war being initiated by one of the new nuclear weapons states or terrorists. Thus, any way that we find to ease the psychological discomfort with nuclear weapons and the nuclear arms race, short of negotiating deep reductions in nuclear arsenals, will only serve to increase the probability of a third power being an instigating force in an accidental or, for that matter, intentional nuclear war.

For a decade and a half the United States and the Soviet Union have treated their commitment under Article VI of the NPT very lightly. They do so at great peril of a much more complex and dangerous nuclear armed world, one that in the future could become uncontrollable.

ACTION

Rather than providing a defense against nuclear attack, Star Wars seriously increases the peril of accidental nuclear war. How long do you think this country, or the world, would last under a Star Wars defense, when decisions must be made spontaneously and exclusively by computers?

There is an urgent need for public pressure demanding careful evaluation of accidental nuclear war dangers while there is still time. Common sense tells us that, before spending $26 billion just to see if the concept will work, it would be far safer and much less expensive to assess the accidental nuclear war dangers through rigorous study and
debate and the use of computer simulations with analytical models.

From an arms control perspective, it would be appropriate to involve the Soviets and other nations in the evaluation of the system at the earliest possible point in time. Multinational evaluation projects will help to assure that the implications of the Star Wars system for accidental nuclear war are widely discussed and understood. This should contribute to a mood in all nations to move toward mutually verifiable arms reduction agreements and no more Star Wars schemes.

NOTES


3. Morrison, David C.; "Lost In Space: Satellites and Accidental Nuclear War," Chapter VI of Babst, Dean; Dely, Alex; Krieger, David; and Aldridge, Robert; Accidental Nuclear War: The Growing Peril, Peace Research Institute, Dundas, Canada, 1984.

4. Boushey, Homer A., Brigadier General (U.S. Air Force retired), suggested this accidental nuclear scenario to the authors during a discussion on the subject.


13. Ibid.


16. Article VI of the NPT states: "Each of the parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."

OTHER THOUGHTS ON "STAR WARS"

"I clearly recognize that defensive systems, if combined with offensive systems, can be viewed as fostering an aggressive policy."

Ronald Reagan
President of the United States

"I do not believe star wars will work...The President wishes to develop a space-based missile defense in order to make offensive nuclear missiles obsolete. This would be a great achievement, if it could be done. But it would be far easier, and far less dangerous, to reduce the arsenals of nuclear weapons on both sides drastically in the near future."

Hans Bethe
Nobel Laureate—Physics

"By equating security with weaponry, the President would also commit us to an unbridled arms race in the heavens and on earth. The star wars program will not make nuclear weapons 'impotent and obsolete,' as President Reagan has promised. Instead it will erode the 1972 Antiballistic Missile Treaty and may well destroy the chances for success at the bargaining table in Geneva. Faced with the possibility of a space-based defense of the United States, the Soviets will build more nuclear weapons, not less. They will also develop defenses of their own, to which we will have to respond by increasing our own nuclear arsenal."

Ted Weiss
U.S. Congressman

"Star Wars strikes me as an attempt to find a technical solution to what is ultimately a political problem. We can't really make ourselves safe all by ourselves anymore. We've got to do it with the Russians. We'll either both be safe or
both be threatened.

Thomas Powers
Author: Thinking About the Next War

“What a difference a year makes! One year ago who would have thought that an idea which makes no technological sense would be so warmly received by both officialdom and the general public? In this sense it is somewhat reminiscent of the concept of perpetual motion, which has always had its fans in the nontechnological world. But unlike perpetual motion, the Star Wars concept carries with it unprecedented dangers. This frightens me.”

Harrison Brown
Editor-In-Chief
Bulletin of the Atomic Scientists

“We believe that the Strategic Defense Initiative (SDI) program represents, not a major advance towards genuine security, but rather a major step backwards. SDI and its political acceptance depend crucially on the participation of individual scientists and engineers at all levels of research. As one step towards halting this program, we pledge neither to solicit nor accept SDI support, and to encourage others to join in this refusal. We hope together to persuade Congress and the public not to support this deeply misguided and dangerous program.”

(This statement was signed by 65 eminent physicists from throughout the United States at an August 1985 workshop held at the Institute for Theoretical Physics at the University of California at Santa Barbara.)

“Star Wars will put an end to any hope for progress in arms control. It will also destroy the best arms control agreement we have, the ABM Treaty . . . ”

Herbert Scoville Jr.
Former Deputy Director of CIA

SUGGESTED READING


Krieger, David, “Preventing Accidental Nuclear War,” Waging Peace Series Booklet 3 (available without charge from the Nuclear Age Peace Foundation, 1187 Coast Village Road, Suite 123, Santa Barbara, CA 93108).


THE AUTHORS

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