STAR WARS:

AN EVEN MORE OFFENSIVE WEAPON SYSTEM

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Since Star Wars was launched by President Ronald Reagan in his speech 23 March 1983, the Washington administration has insisted that it should be referred to as SDI, as Strategic Defense Initiative --not as Star Wars.[1] No doubt this sounds better. It is strategic, defensive, and an initiative: three virtues rolled into one (although evil tongues have suggested to go one better, referring to the system as an American Initiative for Defensive Strategy, with a less positively sounding acronym). The White House, with its historical record not exactly of veracity, particularly under the Reagan administration, would of course harvest some suspicion by its very insistence on how something should be talked about However, that suspicion in itself constitutes no proof. To arrive at the conclusion that "Star Wars" is exactly what is being said, a system for launching a war from the stars, meaning <u>from</u> space, and also <u>in</u> space, considerably more is needed. With the massive distortion of the discussion about this phenomenon, limiting the public discourse essentially to a question of whether Star Wars (SW) is eighty percent efficient or maybe even one hundred percent efficient[2] as a defensive system, not discussing whether it might be offensive, there is some distance to go before a conclusion is arrived at.

I shall take as a point of departure four negative aspects of the nuclear arsenal, making them rather questionable as practical weapons. The first two are frequently pointed out by the peace movement; the other two are more the concerns of the other movement, but they are certainly very aware of the first two.

First, they leave radioactivity behind. Even for a modest 500 megaton nuclear war scenario the radioactivity would be very far above the problematic dosage from Chernobyl estimated to correspond to a 1.2 megaton explosion, soon afterwards detected by the sensors for radioactivity in the Swedish nuclear energy installation Forsmark, north-east of Uppsala. As pointed out countless times the radioactivity might hit the attacker because of the convection in atmosphere and hydrosphere; later on through more complex chains in lithosphere and biosphere.[3]

Second, a nuclear war might lead to a nuclear winter, due to the blackout effect of the many particles catapulted into the atmosphere by the blast, and the fires ignited by the thermal energy. And, once more, that nuclear winter will hit not only the receiver of the attack but also the sender and third parties alike, like the radioactivity or fall-out referred to above.[4]

Third, nuclear weapons are not very precise. But that is not meant that the delivery systems cannot be precise: the CEP* can be brought down to a very small number, at least on paper. What is meant is that the energy unleashed by the nuclear reaction, as blast, thermal energy, radioactivity in both forms and EMP** is so destructive, and so comprehensive that too much is destroyed, not only the precise target one might want to eliminate in a first strike or a second strike. To make the weapon less destructive the profile of energy released may be altered, for instance in the direction of ERW*** (popularly known as the neutron bomb). But still a lot of people will be killed, indiscriminately.

* Circular error probable, the radius of a circle around the target within which 50% of the war-heads will hit.
** Electro-magnetic pulse.
*** Enhanced radiation weapon.

Fourth, the warning time, defined as a period between take-off for a missile and impact, may be half an hour for an ICBM and, say, six to twelve to ten minutes for an IRRM. It has very often been pointed out that these are short periods, not leaving much time for reflection. Another way of looking at the problem would be to say that the time intervals were too long, giving exactly too much time for reflection, for instance for the important reflection needed to launch a second strike or a one and a half strike, triggered by boost-off or the suspicion thereof, not by the impact. With little or no warning time "launch on warning" becomes meaningless, and "launch on suspicion" enters in its place.

Using these four dimensions, very frequently encountered in the debate, the peace movement arrives at the conclusion that nuclear weapons should be eliminated as too dangerous for humankind. This is a completely rational conclusion. But then there is the equally obvious conclusion arrived at by the "war movement", the nuclear planners: that nuclear weapons should be eliminated because they are impractical.[5] Have they arrived that conclusion?

I do not know, but from the talk about eliminating nuclear weapons they may have. Imagine a weapons system with the following characteristics: no radioactivity or other after effects capable of hitting the attacker; no major modification of the environment such as a nuclear winter; a level of precision sufficient to hit even targets that are individuals; and no warning time given to the victim. A system of that kind would, of course, create an enormous temptation because it would come much closer to a first

strike capability than anything known so far. The system would also introduce a level of fear beyond current terror in possible targets. This fear might be believed to have a major deterrent effect not only militarily, but also politically, even to the point of paralyzing the other side lest he should trigger such a devastating response. Provided only one side possesses this capability, that is. And if both do the balance of terror would have become even less stable because of the fear of a first strike.

It is the contention of this paper that Star Wars is such a system, or at least can be developed in that direction, and is so intended. It should be noted, however, that SW alone would only offer two major components in a more comprehensive package that might constitute a first strike capability, meaning the capacity to incapacitate any enemy with impunity. The five components of a first strike package look as follows: (1) the capacity to inflict a devastating, "decapitating" blow; (2) the capacity to eliminate at least a major part of the second strike capability of the other side which today probably above all is a question of effective anti-submarine warfare, ASW; (3) a defensive shield for at least major population centers to destroy whatever incoming missiles there might still be left; (4) a well-developed system of Civil Defense to protect as much as possible of the rest of the population; and (5) a general doctrine of sacrifice making this all "worthwhile", for instance in the of western civilization or socialism, even if (in spite of the preceding four points) losses should be considerable. The reader will have noticed that SW enters, possibly, at points (1) and (3) in this list.

What is Star Wars? The little that is known to the public seems to indicate considerable complexity, consisting of various laser and

particle beams, with rail guns capable of shooting projectiles with tremendous speed, all of this from platforms that could be underground on land, possibly on sea, in the air, definitely in space, and in great numbers. It is not a question of a handful of satellites but of many, some geosynchronous, some orbiting. The basic question is in what direction these contraptions 'shoot', using that generic word for whatever is being done, but thinking mainly of laser, and particle beams and pulses as carriers of the energy needed to destroy enemy force or value (or both).

At this point let us cut into the complexity by making a distinction between three types of Star Wars:

SW_1: shooting upwards; from a land or sea based platform.

SW_2: shooting downwards; from an atmosphere or space based platform.

SW_3: shooting upwards, like for SW_1, and then downwards like for SW_2 because of a reflection devise (often referred to as a "mirror") 10-15 meters in diameter, in a 23,000 miles geosynchronic orbit. A test beam would check for deformations in the atmosphere and the fighting beam could be predeformed in an inverse pattern.

It is absolutely essential to know whether we are dealing with SW_1, SW_2, or SW_3. What is known from publicly available reports seems to indicate, rather unambiguously, that reserach and development are in terms of SW_2 and SW_3. For that reason let us explore for the moment what SW_1 would mean.

I remember as a little boy a cartoon, made in the US, very popular among boys in Norway.[6] The United States was, as usual, at

war with evil forces and those forces were in Asia, portrayed as some kind of Russian speaking people with Chinese faces, evil-looking. They had airplanes and if I am not wrong also missiles. To prevent them from launching a devastating attack Americans had invented a device referred to in the cartoon as a "mine", and these devices were installed along the forty-ninth parallel, shooting beams upwards capable of destroying any incoming airplane/missile. Drama was injected into the cartoon when evil agents removed one of these mines, thereby making a hole in the impenetrable wall---.

I would tend to think that SW_1 is unobjectionable except when used to protect offensive missiles. What shoots up should in principle not come down in a form capable of hitting anything on the surface of the earth, hence not be provocative by being offensive in capability even if not in motivation.[7] And in these matters it is capability that counts, not a motivation that may change from one moment to the next. Capabilities are considerably less ephemeral; any defensive/offensive distinction has to be rooted in them. But SW_1 may not be very practical: what if the warhead is hit but explodes!

In connection with laser and particle beams and pulses it is SW_2 and SW_3, not SW_1, that figure prominently. And here it stands to reason that whatever might destroy a Soviet missile right after boost-off might also destroy what is next to it, for instance agricultural land, a forest, perhaps even a city, people- s a matter of fact it is easier to destroy all of this than to destroy a missile which before boost-off would be protected by a hardened silo. After there is a flame to home in on. But after separation, assuming the missile to be "mirved" with

independently targeted warheads, the warheads would proceed in a cloud of decoys. Speed is another factor, up to the level of 12 Mach, rapid spinning and possibly also a coating of mirrors making the laser beam bounce off because it is refracted. The point has already come in the research and development of this system that micro-wave (and infrared) beams are capable of penetrating the atmosphere (except when there is cloud cover which would have a defracting effect) meaning that considerably less energy should be needed to ignite fires in inflammable objects (and they are numerous), even incinerating them, than to destroy a missile by penetrating the cover and jolting mechanically the sensitive equipment inside, and/or melting down the missile itself. A stationary or slowly mobile inflammable target such as an individual human being should be considerably more easily destroyed than a highly mobile, spinning, mirror-coated and highly hardened, not really inflammable, object such as a missile or a warhead.

Again, I reach back to my boyhood days, to early spring in a Norwegian high school, to the first rays of sun after a brutal Norwegian winter penetrating dusty, unwashed window panes. What did we boys do? We pulled out mirrors from our pockets, caught those rays of sun, reflected them onto the leg of a teacher and gave him what today would possibly be known as a "pulse". He started scratching his leg, not quite knowing what happened. After more pulses he became rather restive and at that point the game broke down because we started laughing. This is not the point of the story, however: the point is that if one of us had walked up to him with a match he would have become suspicious.

If we had been able not to reveal the source we might even have gotten away with the joke because of short-warning time, precise targeting, and no smoking gun of any kind.

The assumption here is that a laser war would operate exactly the way that has been pointed out by Argonne National Laboratory and the conservative R&D Associates think tank (in Los Angeles): through a process of incineration rather than fires.[8] The word "incineration" is important if indicative of the possibility that a "laser winter" might be less harmful than the part of the nuclear winter due to the fires ignited by the thermal energy released. At any rate, a laser war would not be based on blasts so that contributing cause to the winter effect would at least not be present.

Where the other three dimensions are concerned, however, a laser war is clearly superior to nuclear war. There is no radioactivity released if care is taken not to trigger off reactions in nuclear reactors or nuclear bomb dumps in the seven nuclear powers (counting, of course, Israel and South Africa). The precision of a very narrow laser beam should be considerable, noting that the space based satellite might serve two functions: a mapping function through satellite photography and so on, and a destructive function by directing laser beams to the identified target. And here it is worth mentioning that the Pentagon for a long time has been boasting that satellite observation techniques

have been developed to the point where they are able to discriminate between Iranian ayatollahs using their beards as identifying landmarks.

In short, omniscience/omnipresence combined with omnipotence. God's weapon, punishing the unjust, collectively and individually through incineration, as described in 4 Moses 16:35.[9] And with no warning time: God's revenge comes to the unjust because he is unjust, the only warning being the time clock provided by his own bad conscience. One beam for the individual, thousands of beams for the collective evil doer, each one hitting its precise targets or sweeping over the target, leaving trails, parallel or not, of incineration behind.

But God has four characteristics: not only omniscience/omnipresence/omnipotence, but also beneficence. God is good, and this does not sound good. Here, of course, is where the control of the SW discourse enters the picture. We are not to mention the obviou the incredible offensive capability that now is being developed. We are to discuss on the assumption that Star Wars is what it purports to be, a strategic defense initiative, SDI. And even that discussion is limited to technicalities with the figures of 100% efficiency and 80% efficiency being much above what is commonly held possible. What is less often mentioned is the obvious Soviet reaction to these two possibilities. Eighty percent efficiency and the Soviets will, of course, make five times as many missiles to compensate for the missiles lost and retain the level of penetration. But what about 100% efficiency if that could be imagined? At this point the re-

sponse is so obvious that it remains unmentioned. Any potential victim would bring his nuclear warheads into the country possessing a laser capability not with the cumbersome device known as a ICBM missile but in something much more practical; a submarine launched cruise missile from off shore or a suitcase, the modern version of which is known as a backpack. US already has units equipped with such devices to penetrate enemy lines in case of war, planting the warheads (with remote electronic ignition) at strategic/tactical points--and the Soviet Union certainly has the same capability. In the concrete situation of the United States today such warheads would probably not be brought in at Kennedy Airport, but rather by using some of the thousands of Chicanos crossing the Mexican-US border every month, or the low-flying small aircraft used by drug-smugglers of various kinds. In short, a minor operation. The answer I got when questioning authorities knowledgable of "SDI" of whether there is anything against suitcases was a plain no. And that answer was actually repeated when the question was to include backpacks. "Go around the Maginot Line rather than straight into it," someone said.

In short, Star Wars as SDI is absurd. By a process of reductio ad absurdum we simply strike it out, believing that nobody would introduce anything that absurd. The argument is not against an inefficient SDI which can easily be handled by stepping up the production level on the Soviet side, a process which plays into Soviet quantitative capability and does not demand of them qualitative break-throughs. The argument is that as Star Wars

approaches perfection the reactions would be outside the official paradigm for Star Wars: to protect the United States from that which also comes from the stars, the missiles. There is something called dialectics in this world and it runs its less predictable course precisely by refusing to stick to well-known paradigms. A deep dialectic has a tendency to end in the extra-paradigmatic; and Americans are not exactly known for their capacity for dialectic thinking. The tendency has been to think of the Russians as standing still while the US is working on new "systems", not that something totally new might emerge.

But what about the possibility, which even is rather official Washington policy, of using Star Wars as SDI not to protect the population but to protect missile launching sites? In so doing offensive capability would become invulnerable, in violation of the 1972 ABM treaty. High levels of efficiency could be obtained at the same time as scanning devices for suitcases and backpacks would be possible. The sites are far from land or sea borders. Probably this is a part of Star Wars, not only because Washington says so (a criterion not to be taken too seriously) but because it is within the logic of their thinking as far as we can know that thinking.

However, a question why should one do this when the same function, the offensive/invulnerable combination, can be obtained through well protected submarines? The counter-argument would be that one more way of doing the same would provide for higher levels of invulnerability which is an argument to be taken seriously. Yet, I feel that this is not sufficient reason to launch such a major enterprise. There is somewhere some kind of defensive component in Star Wars, but this component can also be seen as one of the five parts of a highly offensive first strike package.

So I arrive at the conclusion that Star Wars is not SDI but SOI, Strategic Offense Initiative. Considerable brain-washing in the form of discourse control,[10] collectively shared by the US mass media, lies behind the truncated debate currently taking place, not least among scientists who so far have wasted nearly four years debating the unnecessary instead of the unthinkable. No doubt the Russians are probably also very far into this, although they possibly concentrate on the cheaper approach of shooting down satellites, maybe even from the beginning of the 1970s. And yet, given the tremendous amounts of capital needed, of all kinds, the mobilization by the United States of some of its rich allies (particularly Japan and Western Germany) among the industrially advanced countries for this purpose the Soviet Union will have difficulties catching up with this qualitative change in the arms race. However, they have been able to do so so far, as any list of those qualitative jumps (one dozen or so after 1945) will inform us. They fight for time, however, and that is probably what they are bargaining for in Geneva, Reykjavik and soon in other places.

What has been said above is compatible with what happened at Reykjavik. Reagan came to the table willing to scrap nuclear arms if he could keep Star Wars; Gorbachev came to the table willing to scrap nuclear arms if he could get rid of Star Wars. But what if one day they do agree to scrap nuclear arms?

The optimist will celebrate getting rid of nuclear arms. The realist will assume that the old story has repeated itself, viz., we are ready for scrapping one weapons system when a new one has been developed far enough to be ready for deployment. And the pessimist will assume that the new weapon system will not only be deployed but also be used; right away.

This does not follow from what has been said above, however. Capacity for incineration of cities, countries (in minutes and hours respectively, according to the think tanks) and individuals does not imply that the capacity would be used, at least not right away, and at least not in the physical sense of that word.

Like for nuclear weapons, however, it will be used all the time, every minute of the day, as a threat. But against whom? Not necessarily against the Soviet Union if we assume the superior capability to be in the hands of the US. The United States does not only have the Soviet Union as an enemy; one might even question whether this officially appointed enemy is the most important one. The most important enemy, of course, is Japan: the only country that has seriously challenged US economic hegemony even to the point (in my view) of winning the economic market race around the world in a very broad spectrum of goods and services (Japan now being creditor nation number one in the world, while the United States has become debitor nation number one--destroying itself economically, partly through the arms race). It is however, unlikely that Japan will be seen as a possible recipient of laser incineration; so far cooptation is the

approach used combined with some economic quarrels. Even cooptation into the Star Wars establishment, a position the Japanese will probably make use of for grandiose industrial espionage in the usual Japanese tradition of listening much, saying little, very little, even nothing. Open eyes and ears; tight lips.

On the other hand, it is also significant that the U.S. has obtained the cooperation not only of the highly predictable Great Britain and Israel--countries that have very "special relationships" to the United States--but also of Germany and Japan where groups (against the Soviet Union) may be found. Barred, by others or themselves from having nuclear weapons of their own SOI, masked as SDI may be attractive to those groups as well as for the U.S.

But then there is the third enemy of the United States: poor people, dispossessed people, all around the world. This is the soil from which terrorism springs forth, of course with a cause, even with good causes, being deprived of land as in the Palestinian case, or of soil as in the Central American/South American case. Terrorism is modernizing, so is state terrorism. From primitive shooting at airports, killing and maiming civilians to bombs here and there the next step may be missiles (already used by the Japanese, as usual up in front where technology is concerned), probably soon nuclear tipped. A detection machinery to find out what is going on is not sufficient any longer: immediate, not only punitive but "eliminative" action will have to be engaged in. And this is where the individually targeted laser beam enters as the obvious response to the present situation, as the ultimate weapon of state terrorism, considerably more precise than the clumsy attack on Tripoli killing and maiming civilians, unable to eliminate the officially appointed "mad dog," Qhadafy himself.

Conclusion: Star Wars is not what it purports to be. It is definitely not SDI; at least not in a meaningful sense from the population point of view. It may serve a protective function for missiles, in which case it is important as a part of a second strike capability, possibly to be used if the Russians should launch or be tempted into launching a laser first strike. Star wars is an offensive system, and enters a first strike package at two points: both as a capability for a devastating attack, and as a defensive shield for selected population centers (and for selected aspects of the system being phased out, nuclear missiles).

Attack, against whom? Even at this point Star Wars is not necessarily what it purports to be: a part of an arms race, and even a qualitatively new phase, with the Soviet Union, deterring Soviet nuclear attack with laser attack in addition to nuclear attack, or deterring Soviet laser attack with laser attack. Soviet Union might even be relatively irrelevant in this context. The real enemy may be the real rather than the officially appointed enemy, the new specter haunting the US substituting for communism as the focus of evil: terrorism. Which then raises the question of what the terrorists would do as a reaction in addition to operating under cloud cover, not to mention inventing some kind of reflective devices that would make laser beams bounce off their targets. Silver clothing for terrorists?

Finally, let it only be added that star wars enters the world arena not only as a military capability, but also in the fields of economic, political and cultural power. Economically

Star Wars is a cover for a large-scale transfer of funds from the enormous military public sector in the United States to an ailing private sector, not only in the US but also among its non-Japanese allies; massively Keynesian in officially anti-Keynesian surroundings. Then, Star Wars is an effort to beat the Soviet Union economically until the Soviet Union cries "uncle". This idea, as old at least as the post-Second World War period, is also with us. Politically, Star Wars is a way of disciplining allies, bringing them into new postures of "unanimity", of "having something on the bargaining table", into new commitments enticed by economic rewards. And culturally Star Wars is a way of enacting the basic metaphor of the United States of America: of being the country closest to God in the whole world, so close, in fact, that the country not only has the right but also the duty of taking on God-like characteristics such as a beneficence never to be doubted (hence the discourse control), omniscience (administered by the National Security Agency, NSA) and omnipotence; now in the shape of laser beams. The Bible and Flash Gordon, two basic ingredients of US culture, rolled into one.

NOTES

1. This has not been very successful, however. Even the New York Times, certainly not an opposition paper, uses formulations like "formally called the Strategic Defense Initiative and popularly called 'Star Wars'"--but tend not to draw any conclusion from this highly significant semantic difference.

2. These percentages are much higher than what today would be considered realistic, but I shall use them for the sake of the argument.

3. For one effort to systematize the ecological impact of nuclear explosions, see Johan Galtung, Environment, Development and Military Activity, Oslo, Norwegian Universities Press, 1982.

4. For one review of the literature in the field, see the Report to the Congress by the United States General Accounting Office (GAO), Nuclear Winter, Uncertainties Surround the Long-Term Effects of Nuclear War, Washington, March 1986.

5. The withdrawal of a number of nuclear arms, such as nuclear land mines, from Western Europe can be seen in this light: they make no sense, are even suicidal--some might say intellectual errors--too destructive to be suitable for detonation on own territory.

6. Flash Gordon. I mention this because Flash Gordon represents very well the conceptual universe underlying Star Wars thinking; preparing a whole population, and not only in the US, mentally to accept such profundly anti-human approaches as Star Wars as normal, natural.

7. The only thing that counts is capability--regardless of how much and how often Reagan protests that Star Wars is "purely peaceful technology" comparable to the development of radar (NYT, 18 October 1986). A very unfortunate comparison, incidentally, as radar can be used defensively for detection, but also offensively for guidance purposes.

8. This is, of course, what has been pointed out for some time already, for instance from the Argonne National Laboratory: "Lasers have the potential of initiating massive urban fires and even of destroying the enemy's major cities by fire in a matter of hours". Or, from the R & D Associates, a think tank based in Los Angeles: "A Soviet laser weapon system...powerful enough to defend against the U.S. ballistic missile threat can incinerate our cities without warning on a time scale of minutes per city, minutes to hours for the whole country. To deter such an attack the U.S. could only threaten to retaliate". This quote is from the Honolulu Advertiser, 12 January 1986--one of the rare occurrences in the US press of this rather basic theme--also quotes Herzenberg, the author of an article on the issue in Physics and Society, as saying, in an interview: "The free electron laser, the excimer laser, and the deuterium fluoride chemical laser (which are the subjects of the current research) all can go through the atmosphere and cause fires".

9. "The fire came forth from Jehova's hand and burned up the 250 men who were offering incense".

10. Mark Sommer, in a paper "A Strategic Defense Against Star Wars", ExPro, September 1985, says: "In early 1984, an employee of High Frontier named John Bosma wrote a secret memo which is reputed to have percolated through the Administration from Reagan on down. In it he proposed a strategy of emotional and political 'packaging' by which Star Wars was to be marketed to the American public. He advocated a 'radical approach that seeks to disarm BMD /ballistic missile defense/ opponents...by stealing their language and cause (arms control), or by putting them into a tough political corner through their explicit or de facto advocacy of classical anti-population war crimes'". The approach was very successfully used by Reagan in his debate with Mondale.

For some of the few articles about the offensive aspects of Star Wars, see T. B. Taylor, "Third-Generation Nuclear Weapons", Scientific American, April 1987, pp. 30-39; R. English, "Offensive Star Wars", The New Republic, February 24, 1986, pp. 13–15; R. English, "Reagan's Peace Shield Can Attack, Too", Washington Post, February 15, 1987; J. Galtung, "Strategic Offensive: The Real Star Wars Threat", The Nation, February 28, 1987, pp. 248–250; W. T. Broad, "Antimissile Weapon Spurs Debate On Potential For Offensive Strikes", New York Times, February 22, 1987. W. T. Broad, Star Warriors, New York: Simon Schuster, 1985, gives rich background material on the psycho-politics of Star Wars.