The Politics and Costs of Postmodern War in the Age of Bush II[1]

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Abstract. *In this study, I chart the genealogy and development of new trends in high-tech warfare which have emerged in the past decade and note challenges and dangers. I discuss the Bush administrations's military program and foreign policy moves, highlighting the ways that the Bush II cabal intensifies the dangers of high-tech war, while undermining efforts at collective security, environmental protection, and global peace. My argument is that the volatile mixture of a highly regressive and unilateralist and militarist administration with the development of high-tech weapons provides a clear and present danger of a protracted and frightening period of war. The mixture of rightwing unilateralism and militarism dramatically erupted in the Bush administration's military response to the terrorist attacks of September 11 and is intensifying the dangers to world peace in the Bush military campaign against terrorism which they are labeling "World War III."*

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The U.S. Commission on National Security for the 21st Century maintained that "Outer Space and cyberspace are the main arteries of the world's evolving systems. Through technical and diplomatic means, the U.S. needs to guard against the possibility of 'breakout' capabilities in space and cyberspace that would endanger U.S. survival or critical interests."[2] In his first speech on military affair after announcing his candidacy for President in 1999, George W. Bush affirmed the concept of a "Revolution in Military Affairs" (RMA) and was soon touting the virtues of a National Missile Defense (NMD) shield. Upon obtaining the presidency through a highly controversial electoral process (see Kellner 2001), Bush called for a dramatic increase in defense spending, pushed the missile defense program, popularly known as Star Wars II. The Bush administration also undermined collective security based on multilateral negotiations and treaties over weapons control by renouncing nuclear weapons treaties and attempts to regulate nuclear testing, biological and chemical weapons, small arms trading, land mines, and environmental treaties, which had been carefully nurtured by decades of diplomacy.

In this study, I first chart the genealogy and development of new trends in high-tech warfare which have emerged in the past decade and note its challenges and dangers. I will then discuss the Bush administrations's military program and foreign policy moves, highlighting the ways that the Bush II cabal intensifies the dangers of high-tech war, while undermining efforts at collective security, environmental protection, and global peace. My argument is that the volatile mixture of a highly regressive and unilateralist and militarist administration with the development of high-tech weapons provides a clear and present danger of a protracted and frightening period of war. The mixture of rightwing unilateralism and militarism dramatically erupted in the Bush administration's military response to the terrorist attacks of September 11 and is intensifying the dangers to world peace in the Bush military campaign against terrorism which they are labeling "World War III."

Cyberwarriors and Cyberwar: Military Postmodernization

> On the battlefield of the future, enemy forces will be located, tracked and targeted almost instantaneously through the use of data links, computer-assisted intelligence evaluation, and automated fire control... I am confident [that] the American people expect this country to take full advantage of its technology -- to welcome and applaud the developments that will replace wherever possible the man with the machine. General William Westmoreland, July 1970

As the quote from General Westmoreland (who was head of U.S. forces in Vietnam during the period of significant U.S. intervention) indicates, the military has long anticipated a mode of high-tech war that would produce an electronic battlefield and eventually replace soldiers with machines. This would constitute a new stage of warfare in which cyborg warriors themselves would be part of a cybernetic-military apparatus marked by the merging of humans and technology and appearance of increasingly autonomous weapons systems, independent of human control. In de Landa's words (1991: 1):

> The image of the 'killer robot' once belonged uniquely to the world of science fiction. This is still so, of course, but only if one thinks of humanlike mechanical contraptions scheming to conquer the planet. The latest weapons systems planned by the Pentagon, however, offer a less anthropomorphic example of what machines with 'predatory capabilities' might be like: pilotless aircraft and unmanned tanks, 'intelligent' enough to be able to select and destroy their own targets.

In 1983, the Defense Advance Research Projects Agency (DARPA, responsible for development of the Internet, published a document outlining a "Strategic Computing Program" (STC) (Gray 1997). The SCP was a five year, $600,000,000 plan to produce a new generation of military applications for computers. The proposal included a thousand-fold increase in computing power and an emphasis on artificial intelligence. It envisioned "completely autonomous land, sea and air vehicles capable of complex, far-ranging reconnaissance and attack missions." These vehicles would have human abilities, such as sight, speech, understanding natural language, and automated reasoning. The SCP promoted the view that the human element in many critical decision-making instances could be largely or totally taken over by machines (see the critique of the SCP by Gray 1997: 53ff). In this momentous process, just as humans are becoming like machines, machines are ever-more taking on human qualities (see Best and Kellner 2001, Chapter 4).

The Persian Gulf TV war indicated the extent to which computer and information systems were of primary importance in the planning and execution of the war and the ways that new fusions of humans and technologies engendered a cyberwarrior (see Kellner 1992 and Best and Kellner 2001). The development is part of a process of creating soldiers better able to integrate themselves into technological systems and to fight increasingly complex battles. This involves cultivating high-tech skills in future soldiers. It requires disciplinary training to fit into technical apparatuses and using psychotechnologies and drugs to enhance human abilities, while providing protheses and

implants that will produce technological amplification of human powers and abilities (Gray 1989, 1997, and 2001).

During the 1990s, reflections proliferated on the transformation of war with the incorporation of information technologies in the warfare state and the development of more de-centralized forms of social organization and a networked society. The first issue of Wired magazine featured a cover story by cyberpunk writer Bruce Sterling (1993) on high-tech war and during the same year cybertheorists Alvin and Heidi Toffler (1993) published a book on the modes of "war and anti-war" that were unfolding in the supposed era of "Third Wave" civilization. By 1995, such views were evident in media culture with Time magazine publishing a cover story on "Cyberwar" (August 21, 1995), and with a cycle of films presenting technowarriors (i.e. The Terminator series, the Cyborg Cop series, Universal Soldier, Cyborg Soldier, and the like).

The accelerated role of information technologies in postmodern war has led some theorists to talk of new "Network-Centric Warfare" and a "revolution in military affairs" (RMA). These changes have been produced "by the co-evolution of economics, information technology, and business processes and organizations." They are, in the words of military authorities, linked by three themes: shifts from platform to network; a change from viewing actors as independent to viewing them as "part of a continuously adapting military-techno ecosystem"; and the "importance of making strategic choices to adapt or even survive in such changing ecosystems."[3]

The postmodernization of war thus pertains to the increasing displacement of humans by technology and the next phase of technowar will probably reveal more "smart machines" supplementing and even replacing human beings. The 1991 Gulf intervention, 1999 NATO war against Serbia, and 2001 Afghan war saw a widespread exploiting of drones, pilotless planes engaged as decoys and as instruments of surveillance, in addition to Cruise missiles and other "smart" weapons. The U.S. military is developing "unmanned" technologies for ground, air, and undersea vehicles.[4] Smart tanks are already under production and as Gray notes:

> There are projects to create autonomous land vehicles, minelayers, minesweepers, obstacle breachers, construction equipment, surveillance platforms, and anti-radar, anti-armor and anti-everything drones. They are working on smart artillery shells, smart torpedoes, smart depth charges, smart rocks (scavenged meteors collected and then 'thrown' in space), smart bombs, smart nuclear missiles and brilliant cruise missiles. Computer battle-managers are being developed for AirLand battle, tactical fighter wings, naval carrier groups, and space-based ballistic-missile defense.... the Army even hopes to have a robot to 'decontaminate human remains, inter remains, and refill and mark the graves' (Gray 1989: 54).

By now the concept of postmodern war is widespread in the media and public sphere like the Internet. For instance, an ABC news program on "Postmodern War" indicates a profound reorganization process in the military that is undergoing changes from heavy, slow, and large-scale machinery, such as 70 ton tanks, to smaller, lighter, faster, and more flexible vehicles. These are equipped with more accurate "smart" weapons and better mapping and sensor technologies which

demand less "manpower" (see abcnews.com, 11/03/99). Exotic high-tech military devices include MEMS (Micro Electrono-Mechanical Systems) that will produce tiny airplanes or insect-like devices that can gather intelligence or attack enemies. MARV (Miniature Autonomous Robotic Vehicle) technologies and various other automated military systems would guide robot-ships, disable land-mines and unexploded arms, and provide more effective sensors, stabilization, navigation, control, and maintenance devices. These technologies would ultimately construct cyborg soldiers who will incorporate such devices into their own bodies and equipment (see Adams 1998: 122-137). Such miniature machines and cyberwarriors would be capable of gathering information, processing it, and then acting upon it, thus carrying through a technological revolution based on new intelligent machines.

Indeed, military spokespeople claim that the next generation of Army vehicles will be "Net-ready." The Army plans to pursue a battlefield digitization project while it develops and fields a new family of lightweight, easily deployable combat vehicles, which will have digital technology built into them, rather than bolting it on as the Army has had to do with older tanks and Bradley Fighting Vehicles.[5] Cyborg soldiers are also utilizing the Global Positioning Satellite system (which can be accessed from a computerized helmet) for precise mapping of the "enemy" and terrain. With the complex communications systems now emerging, all aspects of war -- from soldiers on the ground and thundering tanks to pilotless planes overhead -- are becoming networked with wireless computers providing information and exact locations of all parties. Robot scouts can roam the terrain sending back data instantaneously to commanders. SIPE (Soldier Integrated Protection Ensemble) is an army software program designed to merge all military digital technologies into one integrated data system. Even the physical state of the soldier can be monitored by computers, and one can imagine surgeons operating on wounds from continents away by using robots and the technology of "telemedicine."

Hence, phenomenal new military technologies are being produced in the Third Millennium, envisaged earlier by Philip K. Dick and other SF writers, that are changing the nature of warfare and are part of a turbulent technological revolution. They are helping to engender a new type of highly intense "hyperwar" where technical systems make military decisions and humans are put out of the loop, or are forced to make instant judgments based on technical data. As computer programs displace military planners and computer simulations supplant charts and maps of the territory, technology supersedes humans in terms of planning, decision making and execution. On the level of the battlefield itself, human power is replaced by machines, reducing the soldier to a cog in a servomechanism. French theorist Paul Virilio comments:

> The disintegration of the warrior's personality is at a very advanced stage. Looking up, he sees the digital display (opto-electronic or holographic) of the windscreen collimator; looking down, the radar screen, the onboard computer, the radio and the video screen, which enables him to follow the terrain with its four or five simultaneous targets; and to monitor his self-navigating Sidewinder missiles fitted with a camera of infra-red guidance system (1989: 84).

The autonomization of warfare and ongoing displacement of humans by technology creates the specter of technology taking over and the possibility of military accidents, leading to catastrophe. There is a fierce argument raging in military circles between those who want to delegate more power and fighting to the new "brilliant" weapons opposed to those who want to keep human operators in charge of technical systems (see Arnett 1994; Adams 1998; and Ignatieff 2000). Critics of cyberwar worry that as technology supplants human beings, taking humans out of decision-making loops, the possibility of accidental firing of arms at inappropriate targets and even nuclear war increases. De Landa (1991) fears nuclear accidents and technology out of control in fully-automated cyberwar and calls for the manufacture of weapons over which humans maintain authority and interact creatively with technology, rather than being its object and servomechanism. Rochlin (1997) also cites dangers of accidents that emerge from automated battlefield and cyberwar where humans are forced to react ever more quickly to high speed systems. To support his arguments, Rochlin presents case studies of accidents that have happened in automated milieux over the past decade, thus warning that humans must attempt to maintain control over their technology.

Since the 1980s, Virilio criticized the accelerating speed of modern technology and indicated how it was producing developments that were spinning out of control, and that, in the case of military technology, could lead to the end of the human race (see Virilio and Lotringer 1983 and 1986 and the discussion in Kellner 2000). For Virilio, the acceleration of events, technological development, and speed in the current era unfolds such that "the new war machine combines a double disappearance: the disappearance of matter in nuclear disintegration and the disappearance of places in vehicular extermination" (Virilio 1986: 134). The increased pace of destruction in military technology is moving toward the speed of light with laser weapons and computer-governed networks constituting a novelty in warfare in which there are no longer geo-strategic strongpoints since from any given spot we can now reach any other, creating "a strategy of Brownian movement through geostrategic homogenization of the globe" (Virilio 1986: 135). Thus, "strategic spatial miniaturization is now the order of the day," with microtechnologies transforming production and communication, shrinking the planet, and preparing the way for what Virilio calls "pure war," a situation where military technologies and an accompanying technocratic system come to dominate every aspect of life.

In Virilio's view, the war machine is the demiurge of technological growth and an ultimate threat to humanity, producing "a state of emergency" where nuclear holocaust threatens the very survival of the human species. This consists of a shift from a "geo-politics" to a "chrono-politics," from a politics of space to a politics of time, in which whoever commands the means of instant information, communication, and destruction is a dominant sociopolitical force. For Virilio, every technological system contains its specific form of accident and a nuclear accident would be catastrophic. Hence, in the contemporary era, in which weapons of mass destruction could create an instant world holocaust, we are thrust into a permanent state of emergency that enables the nuclear state to impose its imperatives on ever more domains of political and social life.

In this unprecedented situation, new technologies are creating frightening types of technowar that require rethinking the very nature of military conflict and the viability of military solution to current problems in the face of such dangers. Theorists of novel modes of war focus both

on the transformations of conventional warfare due to the implementation of computer technologies into the warfare state, as well as new phenomena like information war; threats of hacker disruption of the economy, transportation, and communication systems; and exotic modes of biological, genetic, and chemical warfare (which are easier and cheaper to obtain than nuclear weapons).

There is growing apprehension concerning evolving types of chemical and biological warfare, which pertains to virulent and deadly forms of mass destruction.[6] Lethal weapons, such as a stolen nuclear bomb, or weapons using radiation exposure alone, could destroy vast urban areas, or poison water and food supplies. Biological weapons, such as anthrax, the plague, and many other disease-carrying biological agents, can be readily produced and distributed and could be extremely toxic, as films such as Outbreak (1995) have warned and the anthrax attacks of Fall 2001 have demonstrated. Chemical weapons, which some think were deployed, or released by U.S. bombing, in the war against Iraq, are also extremely toxic and relatively easy to procure and deploy. In fact, the Internet makes the production of such armaments available to large numbers of groups and individuals, as well as facilitating the spread of more conventional bombs and munitions.

As noted, cyberwar was previewed in the war against Iraq and was an important component of the Kosovo war that was planned, programmed, and orchestrated through computer networks, as well as the 2001 war against the al Qaeda network and Taliban in Afghanistan. While the Persian Gulf TV war was arguably the most spectacular military campaign of the TV Global Village, the Kosovo war was perhaps the first Internet war. Not only was computerization deployed to plan and execute high-altitude bombing, but the Internet was a primary source of information and debate for the public. The volatile situation on the ground in Kosovo, with heavy NATO bombing, brutal retaliation against the Kosovian Albanians by the Serbs, swarms of refugees in the region, and the ensuing lawlessness made it extremely difficult for the major broadcasting and news corporations to bring in their employees. Instead, freelance reporters wrote on-the-ground testimonials and accounts, sent to leading web-based ‘zines like Salon and Slate, or in some cases newspapers. In addition, there was a tremendous amount of information from the region transmitted over the Internet via list-serves, e-mail, and websites. The NATO war was intensely debated over the Internet, if not the mainstream broadcasting and print media, bringing the Internet to the fore of political communication and debate.

Emergent forms of postmodern war would include new modes of netwar fought in cyberspace wherein warring nations, or terrorists, attempt to destroy information and communications systems.[7] This type of netwar was previewed in what might be called the "hacker wars." The term "hacker" initially meant someone who made creative innovations in computer systems to facilitate the exchange of information and construction of new communities (see Levy 1984 and Hafner and Lyons 1996: 189f). But it came to refer to a mode of "terrorism" whereby malicious computer nerds either illegally invade closed computer systems, or breed viruses or worms that will disable computers and even entire computer networks (see Hafner and Markoff 1991; Sterling 1992). During the 1990s and into the Third Millennium, panic emerged whenever a new virus was discovered and the national security apparatuses are preparing for information war that might disable important computer systems, disrupting the world economy, a nation's defense

establishment, or any aspects of the system of production, transportation, and communication (Schwartau 1996 and Adams 1998).

Such new modes of military conflict have evoked much discussion of "cyberwarriors," an "electronic Pearl Harbor," and dire threats to the world economy and individual security from information war. In this scenario, information guerilla warriors could disrupt or dismantle every vital infrastructure system of the military and civilian sectors, creating problems ranging from power outages and airline crashes to the shutdown of banks, the stock market, and the growing realm of electronic commerce. Quite unlike hand-to-hand combat, cyberwarriors can attack a nation from continents away. Dispensing with guns, tanks, and airplanes, cyberwar takes place through computers and modems. While cyberwar may unfold as abstract and bloodless, it too can have deadly "collateral damage" by effecting institutions like hospitals, emergency services, and air traffic control systems. Hackers and infowarriors employ new weapons such as viruses, logic bombs, trojan horses, and worms, all designed to replicate within and destroy the systems they penetrate.[8]

"Infowar" has been subjected to a variety of different analyses, referring on one hand to a new form of combat waged in the virtual and digital realms (making it a "third wave war" in Toffler's terms), as well as covering struggles over information and communication. But it also refers to everything from mischievous parahacker attacks on military sites to menacing assaults on communication systems by "terrorists." The fast-evolving technologies of infowar waged by parahackers are causing a merging between military and civilian targets, in that it targets civilians and noncombatants.[9]

After the bombing of the Chinese Embassy in Belgrade by NATO forces in May 1999, hackers broke into the NATO website protesting the action and there are many examples of hackers breaking into Pentagon and Defense Department sites to post critical messages and deface government bulletin boards. Hacker campaigns have also been organized against the governments of Mexico, Indonesia and others, protesting against unpopular policies by defacing official websites or bombarding government sites and servers with spam or logic bombs, attempting to shut them down. One of the more spectacular set of hacker attacks against commercial e-business sites occurred in February 2000. Hackers temporarily blocked access to the popular Internet sites Yahoo, Amazon.com (an Internet book company), CNN, and Buy.com, an e-business retail site. Attacks followed on the news site ZDNet and E-Trade, an online brokerage. Demonstration of the ease with which commercial Internet sites can be disabled set jitters through the stockmarket, put the FBI and law enforcement agencies in motion, and set off a flurry of discussions of the need for better cybersecurity.

In July 2001, the White House website was attacked by the “Code Red” virus that has allegedly infected more than 225,000 computer systems around the world and U.S. Attorney General John Ashcroft announced that the government is forming nine special units to prosecute hacking and copyright violations.[10] Meanwhile, a Sircam virus infected countless computer systems and personal computers and once again hacking, worms, and viruses were being perceived as a serious threat to the digital economy and culture. And in May 2001, after a Chinese plane crashed in

a skirmish with a U.S. intelligence plane, Chinese hackers launched several days of attacks at U.S. websites.

The possibility of new forms of cyberwar, and terrorist threats from chemical, biological, or nuclear weapons, creates new vulnerabilities in the national defense of the overdeveloped countries and provides opportunities for weaker nations or groups to attack stronger ones. Journalist William Greider, for instance, author of Fortress America: The American Military and the Consequences of Peace, claims that: "A deadly irony is embedded in the potential of these new technologies. Smaller, poorer nations may be able to defend themselves on the cheap against the intrusion of America's overwhelming military strength" (abcsnew.com, 11/01/99) -- or exercize deadly terrorism against civilian populations. Conversely, it is becoming clear that the more technologically advanced a society is, the more vulnerable it is to cyberwar.

Realizing the dangers, the Pentagon is in the first stages of assembling something like a digital Manhattan Project with multi-billion dollar investments. Alarmed by threats to the national information infrastructure, the U.S. is organizing a Federal Intrusion Detection Network, or Fidnet, to monitor computer networks and attempt to block intrusions and other illegal acts (New York Times, July 28, 1999). Jeffrey Hunter, the U.S. National Security Council director of information who is in charge of the initiative stated that: "Our concern about an organized cyberattack has escalated dramatically. We do know of a number of hostile foreign governments that are developing sophisticated and well-organized offensive cyber attack capabilities, and we have good reason to believe that terrorists may be acquiring similar capabilities." The initiative is currently under review with civil libertarians concerned that the project might compromise privacy and threaten civil liberties while increasing exponentially the power of the state.[11]

Ever scarier, theorists are worrying about new biotechnology and nanotechnology military instruments that might miniaturize weapons of mass destruction in as yet unforeseeable forms (Joy 2000). Following the logic of miniaturization that is characteristic of advanced bio and information technology, some imagine that weapons could become near invisible and release destructive forces in unimaginable ways. The coming stage of military technology could thus involve microscopic nanotechnologies in which what were envisaged as "engines of creation" could become "engines of destruction" (Joy 2000; see the discussion of nanotechnology and Joy's critique in Best and Kellner, 2001, Chapter 4).

Hence, postmodern war is part of the dark side of the postmodern adventure, increasing global insecurities and the possibility of world destruction. Postmodern war thus exhibits a continuation of the worst features of modernity, and threatens to take the development of new technologies to a catastrophic end-game. Yet within the global restructuring of capital, the form of military capitalism which had been dominant since World War Two appeared during the Clinton administration to have been overshadowed by a more user-friendly digital capitalism. In this mode, new entertainment and information technologies would reproduce an infotainment society where war would be irrelevant and even harmful to the pursuit of profit and human well-being. The Internet itself, originally conceived and funded as a multi-point communications system for the

military after a nuclear attack, was restructured into an instrument for communication and information-sharing, commerce, and politics.

Indeed, the information and communications technologies produced by the military could be refunctioned and restructured to be employed for peace, human purposes and empowerment, and not destruction and war. Cyborg systems can perform dangerous industrial labor, or simple household labor, as well as generate electronic battlefields. Conversion from a warfare state to a welfare state was a rational expectation of the end of the Cold War, although the current trends of dismantling the welfare state and continued proliferation of a military-technowar establishment run counter to such expectations. Developments within the Bush administration and the ensuing militarization of the world after the terrorist attack on the United States on September 11, 2001 suggest a new era of military conflict with frightful consequences for the human adventure.

The Bush Administration and Terror War

Obviously, reflections on economic conversion and the transformation of a war economy into a peace economy are utopian in the context of George W. Bush's theft of the presidency in Election 2000 (see Kellner 2001) and the war against terrorism that arose as a response to the September 11 events. In general, Bush's ascent to the presidency suggests the return to a harder, more militarist predatory capitalism. The Cold Warriors from Bush Jr.'s father's circles who surround the figure-head and control policy are key representatives of the virulent military-industrial complex that Dwight Eisenhower warned about. They are promoting a plethora of new weapons systems, some of which they are currently putting to use in the war against terrorism, as well as unparallelled expansion of the U.S. military budget and scope of military intervention.

The Bush administration initially proposed $310 billion in military spending for 2001 with much more expected for a missile-defense system that was the pet project of his Secretary of Defense, Donald Rumsfeld (The New York Times, Febr. 5, 2001). In mid-February 2001, Bush announced that he was seeking an addition $2.6 billion for high-tech weapons and by the end of the month would detail further requests for hikes in the Pentagon budget beyond the $310 billion already targeted (Los Angeles Times, Febr. 14, 2001: A14). By summer 2001, the Pentagon budget was up to $324 billion, while Bush's 2002 budget proposed a 6 percent boost in spending to raise the Pentagon budget to $330 billion (Washington Post, June 23, 2001). And for fiscal year 2003, Bush proposed a record $48 billion increase, raising the U.S. military budget to nearly $400 billion![12]

In a February 2002 testimony to the House Budget Committee, Lawrence J. Korb of the Council on Foreign Relations and Business Leaders for Sensible Priorities noted that the Bush military budget represented a 30% increase over the previous year. If approved, U.S. military spending would exceed the total defense outlays "of the next 15 countries in the world combined." Furthermore, the proposed "increase of $48 billion alone is more than the total military budgets of every nation in the world."[13]

The dramatically increased amount of military spending to develop a space-based "National Missile Defense" system (Reagan's "Star Wars" program reborn) threatened not only to expand the military budget, but to accelerate a new arms race with potentially fatal implications, as well as initiating the militarization of space.[14] Before assuming office, Bush evoked "American responsibilities" and the "promise of America" (a phrase used by progressive Herbert Crowley), while promising a "humble" U.S. foreign policy and eschewing "nation-building." Once in office, however, prior to September 11, Bush pursued a highly irresponsible politics of unilateralism that renounced global environmental treaties, rejected arms limitations treaties, recklessly pushed ahead to build a missile defense system strongly opposed by U.S. allies, and accelerated tensions with Iraq, Iran, North Korea, China, and Russia, to generate "enemies" that would justify a missile defense system and increased military spending. During June and July 2001 trips to Europe, Bush was savaged by the foreign, and even U.S. press, for his policies, encountered demonstrations against his policies, and appeared to be emerging as one of the most embarrassing U.S. presidents in recent history, held in contempt by a growing number of world leaders and peoples.

Indeed, during its first nine months the Bush administration pursued a hardline foreign policy reminiscent of Cold War tension at its highest. In the opening weeks, Bush bombed Iraq and heightened tensions in the Middle East, threatened China, told Russia to expect reduced aid, and alienated Japan when a Navy submarine giving Republican financial supporters a demonstration sank a Japanese fishing boat, killing nine people in the process. The Bush administration worried much of Europe with its aggressive approach to national missile defense (NMD), and made clear that it does not intend to pursue constructive negotiations with North Korea -– an alleged missile threat that if reduced would question the Bush administration's harebrained missile plan. Thus, the world returned to the hardline Cold War paranoid universe of the military-industrial complex warned about by a departing Dwight Eisenhower, while Dr. Strangelove is alive and well in the U.S. Defense Department, concocting Star Wars missile systems that will cost trillions of dollars and have yet to be proved functional.

Bush, Cheney, and Secretary of Defense Donald Rumsfeld had also resurrected the dangerous concept of "rogue state," a concept retired by the Clinton administration, that was sure to increase tensions and the possibility of war. The dangers of the aggressive new Bush foreign policy were soon evident. On March 24, the Washington Post published a report that Bush had a meeting two days before with defense Secretary Rumsfeld who was preparing a report that China had supplanted the USSR as its Number 1 Enemy and should be the focus of U.S. military policy. Some days later, an "accident" occurred when a Chinese plane and U.S. spy plane off the Chinese coast collided and the U.S. plane, loaded with high-tech surveillance equipment and the latest military computers, made a crash landing on a Chinese off-shore island and the crew was held hostage for eleven tense days as the crew's release was negotiated.

Critics claim that the "defining trait" of the Bush administration and major force in determining its hardright policies is "corporate payback." Abrogation of the Kyoto Treaty and the Bush energy policy was payback for the more than $50 million contributed by the oil and energy industries. The former Director of the Star Wars program under Reagan, Dr. Robert W. Bowman"

makes a similar argument in terms of Bush's military policy. Star Wars II, Bowman argues, will "line the pockets of weapons manufactures for decades" at the expense of "optional" programs like health, education, the environment and welfare. Moreover, it provides "the multinational corporations and banks absolute military superiority for their 'gunboat diplomacy around the world.'"[15]

Moreover, the militarization of space is another troubling dimension of Bush administration pursuit of a space-based missile program and unilateral foreign policy.[16] UN treaties have called for the demilitarization of space and the renunciation of space-based military programs. The Bush administration, however, has made clear that it plans to deploy weapons in space with a land, sea, air, and space-based Star Wars II system. The Pentagon has revived the Reagan-era plan for "Brilliant Pebbles," that would place thousands of missile interceptors in space, intensifying the possibility of Space wars and accidental mishaps. Another piece of Reagan's SDI, "Brilliant Eyes," has been resurrected which would consist of a series of low-flying satellites that would be geared to tracking missiles or supposed weapons.

Maintaining a weapons-free space, however, is crucial to a high-tech economy which depends on communications satellites for its functionality, as well as increasing the hopes of global peace. The more weapons flying around in space, the greater chance of their misuse or an accident. It is also tragic that the militarization of space has supplanted efforts for the scientific exploration of space, as the Star Wars II budget is twice that of the entire NASA budget. The destiny of the human race depends on the peaceful exploration of space, while its militarization could threaten the very survival of the human species (see Best and Kellner 2001).

It is also highly disturbing that the Bush administration has undermined every single arms control treaty that it has been presented with. When it rejected a pact to enforce a biological weapons ban in July 2001, a British commentator noted: "America's lone, wanton wrecking of long-running negotiations to enforce the 1972 treaty banning biological or germs weapons is an insult to the pact's 142 other signatories, a body-blow for the treaty itself and a major setback for international efforts to agree to practical curbs on the proliferation of weapons of mass destruction" (The Guardian, July 26, 2001). Bush stood condemned as "proliferator-in-chief" of dangerous weapons whose presidency "confirms a pattern of reckless, unilateralist behavior on arms control, as on environmental and other issues" (ibid).

Once again, Bush carried out the wishes of his main campaign supporters, as it was the biotech and pharmeceutical industries that opposed the inspection program called for in the biological weapons treaty. Although biological weapons are deemed a disturbing threat to the entire world, the U.S. found itself in a minority of one in opposing the treaty, putting U.S. corporate interests before those of global security. Similarly, the U.S. was the sole nation out of 178 to renounce ratification of the Kyoto treaty to combat global warming during a July 2001 meeting in Bonn.

For several weeks following the September 11 terror attacks the global community appeared to be building an effective strategy to fight terrorism by arresting suspected members of

the al Qaeda network, tracking and blocking their financial support, and developing internal and global mechanisms and policies to fight terrorism. Suddenly, however, the campaign against terrorism turned to war. On Sunday, October 7, just short of one month after the terrorist attacks on the U.S., the Bush administration unleashed a full-scale military assault on Afghanistan, purportedly to annihilate the bin Laden network and the Taliban that had been hosting it. The unilateralism of the U.S. response was striking. Indeed, leading American newspapers provided a rationale for U.S. rejection of a UN-led or NATO-led coalition against international terrorism:

> In the leadup to a possible military strike, senior administration and allied officials said Mr. Rumsfeld's approach this week made clear that the United States intends to make it as much as possible an all-American campaign.
>
> One reason, they said, is that the United States is determined to avoid the limitations on its targets that were imposed by NATO allies during the 1999 war in Kosovo, or the hesitance to topple a leader that members of the gulf war coalition felt in 1991.
>
> "Coalition is a bad word, because it makes people think of alliances," said Robert Oakley, former head of the State Department's counter-terrorism office and former ambassador to Pakistan.
>
> A senior administration official put it more bluntly: "The fewer people you have to rely on, the fewer permissions you have to get" (New York Times, October 7, 2001).

In a September 25 speech to Congress declaring his war on terrorism, Bush announced what his administration would describe as "the Bush doctrine." Calling the crusade against terrorism as a war between freedom and fear, between "those governed by fear" who "want to destroy our wealth and freedoms," and those on the side of freedom, Bush asserted that "you're either with us, or against us." Bush also said that his administration held accountable those nations who supported terrorism, and in his October 7 speech announcing a bombing campaign against the Taliban, he claimed that the Taliban leadership had sustained the al Qaeda network and would be subject to military retaliation. Bush warned that his administration was planning to go after other targets later, and there was talk that the war against terrorism and resultant Jihad of Islam against the West could lead to World War III.

As the U.S. continued its bombing campaign through the end of 2001, threatening to expand its military actions to states like Iraq, worries began to circulate that the U.S. military intervention might create more problems than it would solve. When U.S. Secretary of Defense Donald Rumsfeld compared the war on terror to the Cold War, which lasted roughly forty years, the spectre of endless war was invoked. This is perhaps what the Bush administration and Pentagon had in mind when they first named their military intervention "operation infinite justice." Jokes circulated through the Pentagon that an endless war on terrorism would drag them

into “Operation Infinite War.” President Bush regularly referred to World War III in speeches and pledged that he would dedicate his administration to this cause.

“Endless war” would no doubt be a hard project to sell the public for the long-term and one wondered how long it would take for the costs to overwhelm the benefits. Although war throughout the new millennium would keep America’s troops fully employed and the Pentagon budget ever escalating, it would keep U.S. citizens in a state of fear from terrorist retaliation, for endless war would no doubt generate endless terror. Moreover, it was not clear how the U.S. could afford to finance an endless war against terrorism, nor how the global economy could function in a situation of perpetual fear and war.

The first weeks of U.S. bombing in Afghanistan unfolded high-tech warfare in a wildly uneven battle against Taliban and Islamic forces with ancient munitions, a first world military against a fourth world one that still used horse-back troops and revered swords. Old-fashioned B-52’s saturated large areas with explosive munitions while winged B-2 Bombers aloft for days flew from the U.S. to drop bombs directed by Global Positioning System Satellites often with mixed results. With its 172-foot wingspan, these giant flying birds deployed Joint Direct Attack Munitions (J-DAM) to fire a wide array of weapons. Heavy AC-130 gunships armed with howitzers, cannon, and machine guns blasted supposed Taliban and Al Qaeda camps and material, while land-based F-15Es bombed enemy positions, with giant fuel-air explosive “bunker bombs” used to blow up munitions dumps and possible mountain and tunnel hide-outs.

Military theoreticians described the conflict as “asymmetrical” since the Taliban had no sophisticated weaponry or modern military organization. While the U.S. military claimed that it was destroying Taliban “command and control” centers, there was in reality no command or control, at least in the sense normally defined by the contemporary military. Videos showed daily in U.S. military briefings depicted U.S. bombs hitting obscure buildings or vehicles, but it wasn’t clear that these were really military targets, or that the Taliban had a military force in the conventional sense.

Moreover, while during the first weeks of bombing, the U.S. bombing had destroyed many seemingly military targets on the ground in Afghanistan, it had also hit many civilian facilities, including Red Cross facilities and a UN supplies depot, generating many pictures of wounded or murdered Afghan children, and destroyed civilian houses. Such pictures circulated daily throughout the world, and were turning public opinion against the U.S. intervention, especially in the Islamic world where large anti-war demonstrations were a regular feature of everyday life and threats against the U.S. escalated. A flood of refugees was producing heart-breaking images of people fleeing war and facing disease and starvation. Aid agencies continued to plea for a bombing halt so that food could be delivered to refugees, yet the bombing continued unabated into a third and then a fourth and fifth weeks.

In late October 2001, there were reports of helicopter assaults on Taliban positions, Special Ops forces landing seeking Taliban and al Qaeda forces, and the beginning of a longer, more complex campaign. There was much speculation that this was the beginning of a ground

war in which U.S. troops would rout the Taliban. U.S. ground forces never intervened, however, and although the Taliban regime collapsed, Osama Bin Laden and major Al Qaeda and Taliban leaders escaped. Consequently, as of early 2002, the results of the U.S. military intervention are mixed at best, with Al Qaeda and Taliban leaders still at large, millions of refugees and war victims facing starvation, and Afghanistan in chaos.

In retrospect, the Afghanistan intervention represented a new step toward postmodern war. New armed unmanned aircraft like the RQ-1 Predators were reportedly in the field, armed with Hellfire antitank missiles, although reports emerged that bad weather was limiting their effectiveness and many were crashing. An even larger and longer-range unmanned surveillance aircraft armed with missiles, the RQ-4A Global Hawk, that could bring weapons from the U.S. to the other side of the world, was also reported to be in action. Afghanistan thus emerged as yet another testing ground for new weapons and strategies where humans would be replaced by machine satellite-guided planes, taking "postmodern war" and the "revolution in military affairs" to a higher level.

Concluding Remarks

The frightening marriage of the Bush administration and its "revolution in military affairs" with enduring terror war poses renewed threats to global security and world peace. The Bush administration had even before September 11 undermined multilaternal frameworks for controlling arms, and maintaining global peace and security through the regulation of chemical, biological, nuclear, and other weapons of mass destruction. Its pursuit of what is in effect a unilateral military retaliation completely controlled by the U.S. threatens to create an era of intensifying warfare.

The outcome of the U.S. military intervention in Afghanistan is far from certain and will perhaps play itself out for years in sharpening conflicts between the West and radical Islam. While technological revolution and the postmodernization of war are probably inevitable, it is clear that in today's increasingly dangerous world, there must be multilateral agreements to control weapons proliferation and to enforce collective global peace and security. The challenge to progressive forces is to envisage a world without terrorism and militarism. Such a world will require that a global campaign against terrorism emerge that uses intelligence, police, judicial, financial, and if necessary military forces to fight against terrorist networks, criminalizing terrorism as a global crime. But global terrorism is a world-wide problem demanding a multilateral solution. Unilateralist militarist adventures must be renounced along with terrorism, and global forces must evolve that solve problems through diplomatic and political means, while employing the military as a force of last resort. It is doubtful that the human species can survive the dual forces of terrorism and militarism. The challenge we now face is to establish and institutionalize peaceful means to resolve conflict, to criminalize and reduce the global force of terrorism, and to renounce militarism as a dangerous force giving rise to more problems than it can ever hope to solve.

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Notes

[1] The first part of this study draws upon work with Steven Best published in The Postmodern Adventure. Science Technology, and Cultural Studies at the Third Millennium (Best and Kellner 2001). The second part draws on material from my Grand Theft 2000 (Kellner 2001). For helpful comments on the text and sustained discussion of the issues involved I would like to thank Carl Boggs.

[2] See Mark Steel, "The Secret Plans of the World's Most Dangerous Rogue State," June 19, 2001, The Independent.

3. See the account by Vice Admiral Arthur K. Cebrokswky and John J. Garistka at www.usni.org/Proceedings/Articles98/PROcebrowski. htm). Ignatieff (2000: 164ff.) describes the "revolution" in terms of the deployment of precision targeting at a distance and use of computers, also noting conservative military resistance to calls for dramatic transformation of the military (171f.).

4. See "Pilotless Plane Pushes Envelope for U.S. Defense," Los Angeles Times, May 14, 2000: A1

and A-30, and "Robots with the Right Stuff," Wired (March 1996). See also Gunther et al (1994) and Adams (1998).

[5] See Gray 1997; Adams 1998; and www.cnn.com/2ready.combat.vehicle.idg/index.html.

6. See, for example, "Weapons of Mass Destruction" in Popular Mechanics (June 1998): 80ff, and Peter Pringle, "Bioterrorism. America's Newest War Game," The Nation (November 9, 1998): 11-17. This article concludes that threats of the inevitability of catastrophic bioterrorism are exaggerated and are being hyped to promote another arena for military expansion -– claims put in question by the terrorist attacks in Fall 2001. For a recent book on biowarfare, see Miller, et al 2001.

7. Some analysts use "information war" (Schwartau 1996) to cover all the modes of new high-tech war, while Rand theorists David Arquilla and David Ronfeldt (1996) distinguish, unsuccessfully in my opinion, between "netwar" and "cyberwar." I am conceiving cyberwar, as defined above, as a component of technowar, that includes "information war" in a specific sense of using information as a form of warfare, and more generally as a mode of warfare that is governed by information technology. "Netwar" in this sense is thus a form of war within or against computer networks that could include use of computer viruses, logic bombs, worms, and so on against enemy communications networks, or defense of one's systems against enemy attack or intrusion. It might also involve destroying communications satellites with nuclear weapons to disable the networks, or protecting one's own systems against such attack. In the 1999 Kosovo war, there were reports that NATO troops targeted the Serbian information structure (see Ignatieff 2000), and Chinese hackers targeted U.S. computer sites after the supposedly accidental bombing of the Chinese embassy by U.S. planes.

8. The Department of Defense estimates that its 2.1 million computer networks were infiltrated 250,000 times in 1995 (www.fas.org/irp/eprint/snyder/infowarfare.htm). The National Security Association (NSA) calculates that more than 120 countries now have "computer attack capacities" that could overtake Pentagon computers in a way that would "seriously degrade the nation's ability to deploy and sustain military forces" (www.govexec.com/ dailyfed/0497/042297b1.htm). Moreover, teenage hackers, or "script kiddies," can develop programs that will disable electronic commerce and invade computer systems and destroy programs, as has happened regularly in recent years (see Best and Kellner 2001, Chapter 4). With summer 2000 virus attacks of the "Lovebug" and "resume," and summer 2001 Code Red and Siricam attacks, it appears that netwar is now spreading throughout all domains of society, targetting citizens as well as businesses and governments.

9. See "Cyberwarfare Breaks the Rules of Military Engagement," www.nytimes.com/library/review/ 101799cyberwarfare-review.html.

[10] See "Ashcroft Aims at Cyber-Criminals," Associated Press, July 20, 2001, and "Inept Virus Hits White House," Wired News. July 20, 2001.

11. For discussion of the earlier October 1997 Marsh report for the President's Commission on Critical Infrastructure Protection and subsequent U.S. policy initiatives to protect the information infrastructure, see Adams 182ff. The October 2001 USA Patriot Act gave the U.S. government the right to survey without a warrant e-mail and Internet usage, telephone and cell phone communication, and other restrictions on privacy and civil liberties that greatly alarmed civil libertarians; see Declan McCullagh, "Terror Law Foes Mull Strategies," (www.wired.comm, Nov. 3, 2001).

[12]Clinton administration defense spending for fiscal year 1999 was projected at $252.6 billion, with troops cut, but it increased spending on expensive new weapons and high-tech war (Los Angeles Times, February 3, 1999). Moreover, Clinton's 2000 budget allocated over half of the $555 billion discretionary spending budget on "national defense," which was slated to receive $281 billion compared to the second main expense, education, which received a paltry $35 billion and Social Security and Medicare $6 billion (see The Defense Monitor online site at www.cdi.org/dm/ 1999/). As noted above, Bush has increased defense spending significantly, although the depth of his tax cut give-away-to-the-rich has undermined calls for more funding of new weapons programs causing a rift with conservative forces between those who privilege tax cuts and those who favor more military spending. See "Military Budget Creates Rift in G.O.P." New York Times. July 26, 2001. In the wake of the September 11 terrorist bombings, however, there currently appears to be no limit to military spending, although eventually there will be bills to pay…

[13] Lawrence Korb, cited in James Carroll, "Bush's radical shift in military policy." Boston Globe (Febr. 19, 2002). Carroll notes the major shift in the Bush administration from using the military as a force of deterrence not to be used unless absolutely necessary to an aggressive arm of U.S. foreign policy, requiring massive shifts in military spending.

[14] See "Missile Shield Analysis Warns of Arms Buildup. U.S. System could lead other nuclear powers to enhance arsenals, spread technology, report says." Los Angeles Times (May 19, 2000: A1 and A22) and "Risk of Arms Race Seen in U.S. Design of Missile Defense," New York Times (May 27, 2000). For a damning critique of the Star Wars/missile shield programs, see FitzGerald 2000 and on the militarization of space, see Grossman 2001. Finally, for critique of excessive Pentagon and the "iron triangle" of the defense industry, the military, and congress which perpetuates this obscenity, see Greider 1999.

[15] Dr. Robert M. Bowman, "Wounding National Security. Star Wars II Endangers the American people." The News Insider, July 23, 2001. Bowman criticizes his own participation in the earlier Star Wars program which he now terms "military lunacy." He argues that the new Star Wars II would seriously harm U.S. national security by increasing the arms race, isolating the U.S., eating up resources, and violating treaties, while presenting no real protection against nuclear terrorism. Bowman and many other critics also argue convincingly that the Star Wars II shield just cannot work. In addition to Fitzgerald (2000), the Internet is full of critiques of the unworkability of the Star Wars program; see, for example, www.ucsusa.org/security/CM-exec.html.

[16] Secretary of State Donald Rumsfeld, popularly referred to as "Dr. Strangelove" in light of his obsession with space and missiles, announced on May 8, 2001, a sharply increased interest in outer space in U.S. strategic military planning. See James Dao, "Rumsfeld Plans to Seek a Military Strategy Using Outer Space," New York Times, May 8, 2001, and the critique of the proposed militarization of space, "The Risks of a New Space Race," New York Times, Op-Ed, May 13, 2001. The 2001 Terror wars temporarily postponed confrontation over the missile defense program.