Video Games and the Wars of the Future

by Oyang Teng, LaRouche Youth Movement

In 2013, the Army will unleash a new breed of soldier. A soldier whose lethality has been honed by the finest technologies. A soldier equipped to see first and strike decisively. Today, he's yours to command.

—Advertisement for the video game, "Ghost Recon: Advanced Warfighter"

Welcome to Dick Cheney's fantasy world, where the United States fights permanent wars against the "failed states" of the Third World, with legions of Special Forces hunter-killer squads backed up by "shock and awe" air power. This is the reality that Cheney and his backers are actively promoting. And despite the colossal failure of the Iraq War, this so-called Revolution in Military Affairs continues, with heavy emphasis on automated and space-based weapons systems, "information dominance," and computer simulation.

If the wars of the future are to be fought by a new breed of soldier, a ready pool of potential recruits is already being trained. Many of them have not yet entered the military, and some have never touched a weapon. But, thanks to a recently consummated marriage that has been dubbed the "Military-

Entertainment Complex," the games of today are preparing them for the wars of tomorrow.

"Ghost Recon," which is based on the premise of a near-future "U.S. intervention on Mexican soil in order to bring back Democracy," was developed by Ubisoft in conjunction with the U.S. Army to showcase its Future Force Warrior concept, which it plans to implement in the near future. "America's Army," an enormously popular online game, was developed by the Modeling, Virtual Environment and Simulation Institute at the Naval Postgraduate School, and released in 2002 as the "U.S. Army's Official Game" to bolster recruitment.

These are only two examples of dozens of similar titles plying virtual violence as entertainment—and as training.

With American fighting forces bogged down in Iraq and Afghanistan, this new phase in the militarization of entertainment and the commercialization of war, is only the latest in a long-term project to destroy the U.S. military from within, which goes at least as far back as the 1957 publication of Samuel Huntington's *The Soldier and the State*.

A true war-avoidance policy today requires examining the long arc, beginning with the death of Franklin Roosevelt, up to the present moment of existential crisis, as one, unified process. Combined with the man-machine doctrine of cybernetics, the postwar military transformation has been a key feature of the imperial policy of globalization now being used as the imperative for new wars of "Democracy."

The Soldier and the State

At the time that Huntington wrote *The Soldier and the State: The Theory and Politics of Civil-Military Relations*, the United States was already in the midst of a transformation into





The long-term project to destroy the U.S. military from within goes back to Samuel Huntington's 1957 book, The Soldier and the State. The method was provided by the "Military-Entertainment Complex," which produces "games" like "Ghost Recon: Advanced Warfighter," shown here (Huntington, above).

a post-industrial state. President Kennedy's extraordinary scientific-industrial drive for the Apollo Project was a temporary interruption in the design for what Zbigniew Brzezinski called a "technetronic" society. As capital-intensive investment in agriculture and industry gave way to an emphasis on the "white-collar" service economy, another pillar of national sovereignty, the institution of the military, was under assault by what President Eisenhower famously warned of as the "Military-Industrial Complex."

Repudiating the obvious lesson of World War II—that the country's military strength was unmatched when it combined a science-driven industrial-logistical base with a clear moral advantage—Huntington called for a reversal of the idea of the citizen-soldier, which had been embedded in America's republican military tradition since the time of George Washington. Instead, he argued that a "professional" military was one not bound by the principles of the nation, but merely trained in "the management of violence."

"The professional army which fights well because it is its job to fight well is far more reliable than the political army which fights well only while sustained by a higher purpose," he wrote. "The military quality of the professional is independent of the cause for which he fights. The supreme military virtue is obedience." According to Huntington, the Korean War was exemplary, because it was the first major war in

which the American soldier "fought solely and simply because he was ordered to fight it and not because he shared any identification with the political goals for which the war was being fought. Instead, he developed a supreme indifference to the political goals of the war—the traditional hallmark of the professional."

The Soldier and the State, which is on required reading lists for military officers today, was written at Harvard, under the supervision of, among others, Paul Nitze and William Yandell Elliott, forebears of the fascist neo-conservative movement. Nitze and Elliott were among those pushing an escalation of the Cold War through the constant threat of military confrontation against the Soviet Union. To help shape the appropriate public sentiment for such an outright subversion of U.S. interests, Huntington took aim at the "ignorance and naive hopes" of an American population steeped in the anti-imperialist tradition of peace through development, reflected in Eisenhower's 1950s Atoms for Peace program.

It is no surprise that Huntington explicitly attacked the influence of France's École Polytechnique on the 19th-Century curriculum of West Point, America's premier academy for military officers. With a heavy emphasis on subjects like construc-

A Policy for Universal Military Training

The following is excerpted from a policy paper issued by Lyndon LaRouche on Aug. 15, 1979, and reprinted in the May 19, 2006 issue of EIR.

The historical precedent for the internal design of this universal military training program is the French Ecole Polytechnique under Lazare Carnot and Gaspard Monge during the period of 1793-1804. This approach was emphasized at West Point during 1818-28, where it was associated with the work of Commandant [Sylvanus] Thayer....

The error infecting even many of the best among modern West Point graduates is a loss of connection to the notion of a republican military policy, the substitution of the notion of efficient service of a poorly-defined sense of United States' "state interest"—thus tolerating the crucial flaw of both Napoleon and Clausewitz.

What has been forgotten to that extent is the principle of Machiavelli: A modern republic committed to principles of scientific and technological progress has a potentially decisive strategic advantage. If the beneficial influence on citizens caused by an environment of technological prog-

ress is employed as the basis for developing the whole of that citizenry as a well-equipped, well-trained military force in-depth, dimensions of warfare are opened up which give such a state a decisive, qualitative, advantage over the forces of any well-matched adversary....

The point on which Napoleon failed, where Carnot succeeded, is Napoleon's excessive emphasis on the military side of service to mere state interest. In the longer sweep of warfare, in the developments which bring developed indepth capabilities into play, the military potentials of forces are developed on the foundation of the cultivated republican potentials of those persons.

- 1. The individual soldier-citizen must have a developed advantage in cognitive powers.
- 2. The individual soldier-citizen must have a developed sense of the sensuous reality of "theoretical" knowledge—he should be an acting physicist, not a "pure ivory tower mathematician."
- 3. The individual soldier-citizen must define his or her life as the meaningful mediation of the continuing development of society toward higher levels of knowledge and practice.

For these reasons, the best military training is that which is based on the training of young engineers of a nation which is itself an ongoing experience of technological progress.

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^{1.} Speech by Clifford A. Kiracofe, Jr., "U.S. Imperialism: The National Security State," *EIR*, March 17, 2006.

tive geometry, West Point produced the leading engineers in the country, who directed the massive rail-building projects that integrated the continental expanse of the country. These served as an essential part of the nation's military and economic security. Through this kind of education, the military was not producing trained killers, but productive citizens who could think creatively (see box).

Man and Machine

The cybernetics project of Bertrand Russell's protégé Norbert Wiener also attacked the "naive" belief in progress that Americans, inspired by the promise of new breakthroughs in nuclear science and space travel, stubbornly defended. Progress, Wiener argued, was merely an illusion, since the entire universe (including the human race) had been handed an irreversible sentence: death by entropy.

"May we have the courage to face the eventual doom of our civilization as we have the courage to face the certainty of our personal doom," he wrote in his 1950 *The Human Use of Human Beings: Cybernetics and Society.* "The simple faith in progress is not a conviction belonging to strength, but one belonging to acquiescence and hence to weakness."

Wiener claimed that while living organisms, including human beings, may appear to exhibit non-entropic characteristics, they are merely isolated systems fighting the natural tendency towards disorder. They do this through feedback mechanisms, which amount to nothing more than information exchanges through electrochemical impulses transmitted throughout the nervous system. Since every feedback mechanism in a living organism has its correlative in a mechanical system, he said, there is fundamentally no difference between animals—or humans—and machines.

Therefore, Wiener says, society, like an individual organism, could be reduced to a system of communication and control, and be programmed. A series of cybernetics conferences were held under the sponsorship of the Josiah Macy Foundation to elaborate such methods of social control. Many of the social engineers who attended, such as Margaret Mead and Gregory Bateson, were instrumental in the Frankfurt-School manipulation of the anti-science 1960s rock-drugs-sex counterculture, through such agencies as the Congress for Cultural Freedom.²

The effort to infuse the doctrine of cybernetics into all aspects of culture and economic policy can be heard today in the oft-repeated maxims of globalization, which hail the mythical



DARPA's Augmented Cognition (AugCog) project aimed to create soldier-computer "dyads," and the movement for a "Post-Human Renaissance" where "there are no demarcations between bodily existence and computer simulation, between cybernetic mechanism and biological organism." This would become the holy grail of the research for future battlefield technologies, as well as much of today's video-game industry. Shown: a cyborg in the making at the AugCog and Tactile Situation Awareness Lab, Pensacola, Fla.

realms of "Information" and "Cyberspace." Wiener goes so far as to predict that the day will come when we are able to "transmit the whole pattern of the human body" as if through telegraph, to be reconstructed by an appropriate "receiving instrument."(!)

But, though Wiener's pseudo-science easily lent itself to science fiction, cybernetic theories of automation were being put into practice. The Defense Department's Advanced Research Projects Agency, known as ARPA (today called DARPA), was the dominant sponsor of computer-related research beginning in the 1950s. Cold War-driven projects like SAGE (Semi Automatic Ground Environment), an automated air-defense network of unmanned jet planes, led to a growing interest in war gaming and command systems studies. The coming age of automation, according to Wiener, would usher in a "Second Industrial Revolution."

Behavioral psychologists like J.C.R. Licklider, meanwhile, spun new theories to explain the emerging interface between man and machine. Licklider had been a participant at Wiener's cybernetics conferences and was hired by various government, academic and private research labs, many of which sprang up with funding from ARPA. While heading the Command and Control Research division of ARPA in 1960, he wrote a paper titled "Man Computer Symbiosis." In it he stated, "The hope is that, in not too many years, human brains and computing machines will be coupled together very tightly, and that the resulting partnership will think as no human brain has ever thought and process data in a way not approached by the information-handling machines we know today."

That hope would take form in such later projects as DARPA's Augmented Cognition (Aug-Cog) to create soldier-computer "dyads," and the movement for a "Post-Human Renaissance," where "there are no demarcations between bodily

^{2.} Jeffrey Steinberg, "From Cybernetics to Littleton—Techniques in Mind Control," *EIR* May 5, 2000.

existence and computer simulation, between cybernetic mechanism and biological organism." This would become the holy grail of the front-end research that has spun off not only future battlefield technologies, but also much of today's video game industry.

Counterculture to Cyberculture

The effects of the postwar assault on FDR's legacy exploded into full view with the Vietnam War. Most important, it signalled the top-down degeneration of U.S. policy in the aftermath of President Kennedy's assassination, while experiences on the battlefield showed that kill-power alone doesn't win wars.

Combat training had increased the firing rate—that is, the percentage of American soldiers who would shoot their weapon at the enemy with the intent to kill—from the 15-20% during World War II, to over 95% by the end of the Vietnam War. New methods conditioned soldiers to shoot at human-like targets on reflex, to break down the natural psychological aversion to killing other human beings. This kind of stimulus-response operant conditioning would become a central feature of video-

game "shooters" that could be found at most arcades beginning in the 1980s, and are now a fixture at U.S. military installations worldwide.

The concept of the "electronic battlefield" was also introduced during Vietnam, where automated or semi-automated systems coordinating land, sea, and air power could supposedly sanitize warfighting.

Military planners, sitting in front of display screens hundreds of miles away, would call in airstrikes on digital blips, registered from sensors, inserted along the Ho Chi Minh trail, a key supply route for the North Vietnamese. Systems analysts extrapolated the amount of damage their bombs were inflicting on enemy equipment and personnel, but soon discovered that their readings were vastly inflated. (It was claimed that more trucks had been destroyed in these operations than actually existed in the country.)

Surrounding these new developments in military practice, was the transition from "counterculture to cyberculture" then taking shape amidst the social and political trauma of the Vietnam years, and chronicled by figures like Stewart Brand in his 1972 *Rolling Stone* article, "Spacewar! Fanatic Life and Symbolic Death Among the Computer Bums." ("Spacewar!" was an early video game, created as a recreational side project at one of the MIT's ARPA-funded computer labs).



The transition to the so-called Information Age as the natural evolutionary shift from "second wave" industrial civilization, to "third wave" post-industrial civilization, was celebrated in Alvin and Heidi Toffler's (above) 1980 The Third Wave. In their 1993 follow-up book, War and Anti-War, they argued that, under the clash between second- and third-wave cultures, nation-states would dissolve, as they faced "endless outbreaks of 'small wars.'"

This new cyberculture would embrace not only the antiauthoritarian romance of digital communalism, typified by the advent of the Internet, but also the supposedly liberating principles of "market populism"—that is, the anti-government economics of globalized free trade.⁵ As stated by two of today's leading advocates of the Revolution in Military Affairs, Felix Rohatyn and George Shultz, this supranational economic model was far better suited for the operations of private mercenaries than for national armies that might, after all, be called upon to defend national interests.

Third-Wave War

By 1980, nearly a decade of deindustrialization and deregulation had followed the elimination of the gold-reserve-based Bretton Woods system. The transition to the so-called Information Age as the natural evolutionary shift from "second wave" industrial civilization, to "third wave" post-industrial civilization, was celebrated in Alvin and Heidi Toffler's 1980 *The Third Wave*. In their 1993 follow-up book, *War and Anti-War*, they argued that under the clash between second- and third-wave cultures, nation-states would dissolve, as they faced "endless outbreaks of 'small wars." Militaries, including privatized "professionals" on contract with the United Nations or individual states, would have to be reshaped to adapt to this post nation-state world of "anarchic turbulence."

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^{3.} Tim Lenoir, "All But War Is Simulation: The Military-Entertainment Complex," *Configurations*, Vol. 8, No. 3, Fall 2000, pp. 289-335.

^{4.} David Grossman, On Killing: The Psychological Cost of Learning to Kill in War and Society (Boston: Little, Brown and Co., 1995).

^{5.} Harley Schlanger, "From Hippies to Hedge Fund Operators: The Case of Jeff Skoll," *EIR*, April 20, 2007.

At the same time, military officers like Gen. Donn Starry, were closely studying how to apply the concepts of the third wave to warfighting. Starry was then head of the Army's Training and Doctrine Command, which was formed in 1973 to rethink Army doctrine, and would draw on some of the worst concepts then being popularized to sell the end of national sovereignty in the sleek packaging of "globalization."

In the aftermath of Vietnam, cyberfreaks, new agers, and downright occultic Satanists had thrown their efforts into remaking the military. Army officers Col. Paul Vallely and Lt. Col. Michael Aquino authored a 1980 discussion paper titled "From PSYOP to MindWar: The Psychology of Victory," detailing a scheme to utilize new technologies to wage the equivalent of psychological total war, using America's dominance of "electronic media" to "make possible a penetration of the minds of the world such as would have been inconceivable just a few years ago." In the Hobbesian virtual world projected by these utopians, the U.S. military would be the world's high-tech Leviathan, playing "whack-a-mole" with any upstart regional power that refused to accept the emerging consensus for a globalized world order.

The new paradigm was called "Transformation," and would emphasize smaller, more mobile, more lethal forces, not dependent on the (quickly shrinking) in-depth industrial capacities of the national economy. The "lethality" of the individual "warfighter" would be enhanced by networked communications and other digital technologies. The new military ideal would no longer be the model of the citizen-soldier, but that of the cyborg.

The Military-Entertainment Complex

It was also in 1980 that the military formed its first major partnership with a video-game company, when the Army contracted with Atari to modify its tank-shooter arcade game "Battlezone" for official training use.

Video games had come into their own during the late 1970s, having been developed by veterans of early ARPA-funded defense projects. By 2006, video and personal computer (PC) games had become a \$13.5 billion industry (not counting the many online games available free), including a huge array of war-based games, ranging from simulations of fictional NATO counterterror operations in "Rainbow-Six: Rogue-Spear," to re-enactments of World War II battles in the "Medal of Honor" series. Game company Kuma\War (motto: "Real War News. Real War Games.") goes a step further, offering re-enactments of battles only days or weeks old, with a constant real-life source for updated missions coming straight out of Iraq and Afghanistan.

Already, by the early 1980s, when games and graphics were prehistoric by comparison, military recruiters began to

troll video arcades to find kids whose skills would serve them well in future combat roles.⁷

With the end of the Cold War, the military's transformation kicked into high gear. Then-Secretary of Defense Dick Cheney massively downsized the military, hired Halliburton to conduct a secret study on the privatization of core military functions, and authored a Defense Planning Guidance calling for the United States to maintain lone superpower status through preemptive wars. He also oversaw the deployment of 500,000 American troops for the 1990-91 Gulf War, during which U.S. technological supremacy was seen as proof, by advocates of the Revolution in Military Affairs, that war had entered the information age.

President Clinton's Defense Secretaries William Perry and William Cohen were also big fans of "information warfare." In a 1997 speech at Fort Irwin, Cohen told the troops: "What we're witnessing now is the transformation of the level of information as broad and as absolute as one can conceive of it today. So, actual domination of the information world will put us in a position to maintain superiority over any other force for the foreseeable future."

Despite the proliferation of euphemistic phrases and acronyms to describe this supposedly new form of war, the stench of old-fashioned British-style imperialism is hard to cover up. For example, Pentagon advisor Thomas P.M. Barnett, in his book *Blueprint for Action: A Future Worth Creating* (G.P. Putnam's Sons, 2005), outlines a lunatic plan to enforce globalization through a combination of "Netcentric" (high-tech automated weapons systems) and "Fourth Generation" (Special Forces counterinsurgency) war, to export security from the "Core" (the globalized Western world and its allies) to the "Gap" (everyone else). He gloats that young people are already attuned to this policy, given that they are "the most overly programmed ... generation that America has ever produced."

'All But War Is Simulation'

In 1992, the U.S. Army established the Simulation Training and Instrument Command (STRICOM), tasked with developing the Advanced Distributed Simulation Technology program and furthering links between simulations research and the armed forces. It has since changed its name to PEO STRI (Program Executive Office for Simulation Training and Instrumentation Command), but has retained its motto: "All But War Is Simulation."

Ten years earlier, SIMNET (Simulated Network) had been launched by DARPA's Jack Thorpe, a retired Air Force major. With the help of private contractors Perceptronics and BBN Laboratories (which once employed behavioral psy-

^{6.} Jeffrey Steinberg, "Cheney's 'Spoon-Benders' Pushing Nuclear Armageddon," *EIR*, Aug. 25, 2005; and "Satanic Subversion of the U.S. Military," *EIR*, July 2, 1999.

^{7.} Ed Halter, From Sun Tzu to Xbox: War and Video Games (New York: Thunder's Mouth Press, 2006).

^{8.} James Der Derian, Virtuous War: Mapping the Military-Industrial-Media-Entertainment Network (Boulder: Westview Press, 2001).



The mission of the Institute for Creative Technologies (ICT) at USC, is to construct Star Trek's "holodeck." Their mandate is to push the boundaries of interative stimulation; so far, the sense experience is limited to wraparound projection screens, vibrating headsets, and a "scent collar" that can emit the authentic battlefield smells of gunpowder and Arabic spices. Shown: a computer image of a Star Trek Holodeck.

chologist Licklider in the 1950s), the military sought to create a "networked virtual battlespace," which would allow multiple people to train simultaneously on different modules. When SIMNET became operational in 1990, one of its first applications was the Army's Close Combat Tactical Trainer for tank warfare, which would be a major part of ground operations during Desert Storm.

Of course, computer-simulated combat was not confined to military research centers. A whole generation of youth was spending increasing amounts of time in virtual battle in the arcade, on their home video-game consoles, and increasingly on their PCs. The 1993 release of id Software's "Doom" for the PC was something of an innovation. Although the first-person shooter genre had been introduced with the previous year's "Wolfenstein 3d," "Doom" had more violence and better graphics. Subsequent versions also included the source code, allowing players to modify the game to their personal specifications.

It was such a modification that produced "Marine Doom." In 1996, Marine Commandant Charles Krulak issued a memorandum with a directive to find ways to ensure that "Marines come to work and spend part of each day talking about warfighting: learning to think, making decisions, and being exposed to tactical and operational issues," including through the use of "computer-based war games." The Marine Corps Modeling and Simulation Management Office established a "Computer Based Wargames Catalog," and two Marine programmers, who would later go on to work for video-game companies, modified "Doom II" as a tactical trainer for fourman fire squads.

A 1997 report entitled "Modeling and Simulation: Linking Entertainment and Defense," summarized the proceed-

ings of a National Research Council conference which brought together representatives from the military and entertainment world. Their goal was to map out a working relationship whereby the same cutting-edge simulations and virtual reality research brought to bear on enhanced training programs for the military, could also be used in commercially developed video games. Such would be the mission of the Institute for Creative Technologies (ICT).

Just Like the 'Holodeck'

With \$45 million from the Army, the ICT was established in 1999, at the campus of the University of Southern California to be the premier laboratory for the science, and art, of fantasy. It is staffed with Hollywood writers, graphics designers, and computer engineers, whose simulations research revolves around behavior modelling and artificial intelligence.

But the ultimate aim, explicitly outlined by some of ICT's creators, is to actually construct Star Trek's "holodeck" (the holographic simulations room used on the TV show). Though the "immersive experience" they have achieved so far is still limited to wraparound projection screens, vibrating headsets, and a "scent collar" that can emit the authentic battlefield smells of gunpowder and Arabic spices, their mandate is to push the boundaries of interactive simulation.

As stated in the summary for the ICT's Sensory Environments Evaluation (SEE) project, whose research includes the role of video-game play on performance in simulated environments: "Recent neurobiological studies have found that emotional experiences stimulate mechanisms that enhance the creation of long-term memories. Thus, more effective training scenarios can be designed by incorporating key emotional cues." Creating memories is exactly what simulation research is all about, according to West Point graduate Michael Macedonia, the chief scientist and technical director of PEO STRI who helped create the ICT.

In addition to conditioning through immersion, new combat training techniques emphasize "increased situational awareness" for "data-rich environments," namely, the urban battle zones American soldiers are expected to fight in during the coming years. DARPA's Improving Warfighter's Information Intake Under Stress project, otherwise known as Augmented Cognition, shows where this research is headed.

Through a device attached to the soldier's head, brain activity would be regulated by a computer interface, to optimize the incoming information flow of auditory and visual data from the environment, creating a symbiosis between man and machine called a dyad. Here is Huntington's professional sol-

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dier with a cyberculture twist: a souped-up warrior whose primary virtue is that he can "process information" faster and better than the enemy.

The training techniques being designed by today's "visionaries" in virtual technologies and artificial intelligence are, in reality, based on nothing more than the reductionist belief that the human mind is a programmable system, not fundamentally different from an animal or machine. This absurd premise had already been thoroughly refuted by the time of Plato, where, in dialogues like the *Meno*, Plato demonstrates the characteristic power of the human mind to transcend logical systems—in other words, to change the rules of the game.

Killer Graphics

With ventures like the ICT, the gap between official training simulations and gaming entertainment, which had been shrinking for 20 years, has all but vanished. The commercial logic of using video games for training is reflected in growing profits for game companies, while the military logic of relying on recruits primed on violent games jives with the new emphasis on lethality.

Earlier this year, "America's Army," "The Army's Official Game," surpassed 8 million registered users, as one of the most played games. Like the extremely popular "Counterstrike," "America's Army" is a networked first-person shooter, with the added feature of taking the "recruit" through virtual boot camp and basic combat training before the start of a variety of simulated missions, all of it rendered down to authentic detail. Although it is a recruiting tool for the U.S. Army, the game is available free to anyone in the world with a computer and an Internet connection.

While the PC-based "America's Army" was produced by the Navy's MOVES Institute, the ICT Games Project, with the collaboration of Sony, and gamemakers THQ and Pandemic Studios, turned out the console-based "Full Spectrum Warrior" in 2004, with a sequel in 2006. The commercial version is only slightly different than that used as an official training aid, though a simple code available to gamers unlocks the military version. The game—whose title refers to the Revolution in Military Affairs concept of full-spectrum dominance, a key term in the Defense Department's "Joint Force" blueprints for future war—simulates urban combat against fictional Middle Eastern insurgents like the Mujahideen al-Zeki and the Anser al-Ra'id.

Though players gun down "insurgents," and blow up buildings, cars, and people, developers emphasize that, more than anything else, these games teach "leadership skills" and teamwork.



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The Next Revolution

While globalization has brought our once-proud economy to the brink of a violent implosion, our military has been reduced to fighting brutal wars of occupation.

In Iraq, we see none of the gleaming attributes implied by high-flying phrases like "Netcentric Warfare," "Full Spectrum Dominance," or "Third Wave Cyberwar"; but only the decay of wrenching poverty and desperate futility brought on by endless urban combat. The actual Revolution in Military Affairs has aimed to destroy the fundamental principles of the military itself.

A challenge stands before the young adult generation of the world today, the choice of pathway for the next 50 years of human history. Recent developments suggest an imperative that does not involve the permanent wars of Cheney's preference. Instead, they point to the possibility of worldwide corridors of development, spanning the globe in a network of nuclear power plants, magnetic levitation rail lines, and new agro-industrial centers.

Such an undertaking would bring sovereign nations into new relationships of cooperation to uplift their populations, and call upon transformed institutions—including the military, reconnected to a national sense of purpose—to carry out the greatest engineering feat in human history.

This is a mission that will also call upon the creative powers of the next generation of world leaders, powers not dulled by digitally enhanced fantasy. Such is the new breed of statesmen ready to emerge.