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“In the long run, the best way to end terrorism is to drain the pool of marginalized and humiliated people . . .”

— Lloyd J. Dumas
(see page 10)

The War and the Economy

James K. Galbraith

As I write, the war in Afghanistan seems to be nearing an end, one that will permit food to reach the Afghan people through the winter, and that raises hopes for a new political solution in that country eventually.

Whether we have achieved similar success in the larger struggle against violence and terror is less clear. Secretary Rumsfeld, in particular, has warned that we are entering a war that will not end in our lifetimes. There is little reason to doubt his judgment. And particularly not, if Americans draw the wrong lessons from the Afghan experience and place too much faith, from this point forward, in the effectiveness of military power.

The task of economists now is to provide alternatives. We need to spell out the steps that must be taken — in the governance of the world economy — to reduce the awful temptations of violence, terror and war. These must involve

measures that improve the capacity of the United Nations, that reduce the flows of armaments in volatile regions, and above all provide the financial and regulatory frameworks necessary for sustained growth in impoverished and highly unequal regions. Since none of this can happen unless the United States and its industrial partners are themselves stable and prosperous, economists also need to give their attention to the policy changes in this country that are required to end the present downturn and restore stable, balanced growth and full employment.

The mission of ECAAR is therefore more vital than ever before. Rather than Secretary Rumsfeld’s vision of a perpetual war, we seek to lay the conceptual foundations for a just and lasting peace. We ask all members of our profession who share this objective to join us, to provide financial support; above all we ask you to share your ideas and energies, and to contribute your work to this cause.

U.S. Missile Defense after the Bush-Putin Summit

Lisbeth Gronlund

Prior to the November 12-15 summit meeting between Presidents Bush and Putin, there was widespread speculation that the two leaders would “cut a deal” on nuclear reductions and missile defenses that would allow the United States to conduct tests of missile defenses that were otherwise prohibited by the Anti-Ballistic Missile (ABM) Treaty. While President Bush pledged to reduce the U.S. deployed nuclear arsenal from 7,000 warheads to 1,700-2,200 operational warheads over the next decade, and President Putin promised to reduce Russia’s arsenal by two-thirds, they announced no agreement on missile defenses.

What does this mean for the future of the U.S. missile defense program? The short answer is: not much. For several years, technology, and not the ABM Treaty, will continue to be the major constraint on building defenses against long-range missiles.

Under the Clinton Administration, the United States moved beyond basic research on missile defense technologies and began developing a missile defense system whose components and design were specified in detail.

The “midcourse” system would use ground-based “hit-to-kill” interceptors in the midcourse of the warhead’s trajectory to destroy the incoming warhead by colliding with it in outer space. While deploying this system would be illegal under the ABM Treaty, full testing is permitted.

Shortly before leaving office, President Clinton decided not to begin deployment of this missile defense system, in large part because the technology was not ready and the system was known to be vulnerable to a variety of simple countermeasures that an attacker could use to confuse or overwhelm the defense.

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Desired End State: Decisive Victory Through Regime Change

John Pike

The fundamental paradox of the Quadrennial Defense Review (QDR) was overshadowed by the September 11th terrorist attacks. The American response to the attacks has reversed, at least for the moment, the fundamental premise of the QDR.

The premise of the QDR was the inexorable extension of American hegemony largely through unilateral initiatives focused on military power. Following September 11th, the Bush Administration has embraced a multilateral diplomacy unprecedented in recent history. But the paradox of American military power remains. The QDR found it far easier to articulate a vision of American military hegemony than to describe how this might be achieved with available resources. The report was filled with new and ambitious goals and virtually devoid of details as to what must be done anew so that these goals might be achieved.

The most widely heralded innovation of the QDR Report was the abandonment of the previous "two war" planning requirement. But upon closer inspection rather the opposite appears to be the case. The requirement to fight two nearly simultaneous major theater wars was the centerpiece of post-Cold War planning and the central focus of criticism of that planning. Some critics suggested that the force structure was inadequate to meet these requirements, while others suggested the threat had been inflated to justify excessive force structure.

The QDR Report states that "The new force-sizing construct specifically shapes forces to . . . [s]wiftly defeat aggression in overlapping major conflicts while preserving for the President the option to call for a decisive victory in one of those conflicts — including the possibility of regime change or occupation. . . . The United States is not abandoning planning for two conflicts to plan for fewer than two. On the contrary, DoD is changing the concept altogether by planning for victory across the spectrum of possible conflict." The construction "overlapping major conflicts" would appear to be little more than a reformulation of the previous two-war requirement. Indeed, far from reducing the previous requirement, the QDR Report raises the ante by stating decisive victory through regime change as the desired end state of at least one of the two wars. While regime change through occupation has reportedly been the objective of U.S. war planning on the Korean peninsula at least for the past several years, this marks the first time the United States has authoritatively stated war aims that went beyond restoration of the status quo ante-bellum, or the vague "termination on terms favorable" to the United States.

The two-war requirement was apparently modified through extension of the theaters in which such wars can be waged. Hitherto, North Korea, and either Iran or Iraq, were the stated adversaries for the two wars. The QDR Report states that U.S. forces must be capable of "precluding hostile domination of critical areas, particularly Europe, Northeast Asia, the East Asian littoral, and the Middle East and Southwest Asia." Upon close reading, it becomes clear that the only areas excluded from the zone of vital American interests are Russia, China, and Africa.

Another fundamental innovation in the QDR Report "...was to shift the basis of defense planning from a "threat-based" model that has dominated thinking in the past to a "capabilities-based" model for the future. This capabilities-based model focuses more on how an adversary might fight rather than specifically whom the adversary might be or where a war might occur." While the operational implications of this construct are obscure, it is difficult to avoid concerns that this new model will create open-ended force requirements divorced from those created by real-world adversaries. In the absence of reality-testing imposed by considering "whom the adversary might be or where the war might occur" there would arise an unavoidable tendency to plan against largely conjectural adversaries whose capabilities are precisely those that would justify the parochial priorities of the services and defense

contractors. The driving force in this new construct would appear to be the capabilities of American forces rather than a military postured to respond to actual threats.

The open-ended requirements levied by the QDR Report are further accentuated by the new strategy to "... dissuade other countries from initiating future military competitions...by maintaining or enhancing advantages in key areas of military capability. . . [D]issuasion will

also require the United States to experiment with revolutionary operational concepts, capabilities, and organizational arrangements." Although the QDR Report refers generically to "other countries," there can be little doubt that this should be understood to mean China. Or rather, not the actually existing China of the year 2001, but the worst case China of the year 2020. During the Cold War the tendency toward worst-case Soviet threat assessments was always at least partially tempered by the existence of a real Soviet Union against which such assessments could be measured. Taken at face value, "dissuasion" presents a far more demanding and less constrained planning requirement. The United States must overmatch the full range of potential future Chinese military capabilities while China itself need only pursue some smaller subset of such capabilities.

The QDR Report was predictably focused on the new priority of homeland defense, and the enduring priority of ballistic missile defense. The high priority attached to these topics, however, substantially exceeded the sparse programmatic details contained in the report. It did state, however, that the Navy would "develop new concepts of maritime pre-positioning, high-speed sealift, and new amphibious capabilities for the Marine Corps. . . .DoD will accelerate the conversion of Trident submarines to guided missile submarines." Surely more program changes are in the works, on homeland defense, missile defense, and other programs. But only when these details are fleshed out will the significance of the Rumsfeld "transformation" come into focus.

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“The most widely heralded innovation of the QDR Report was the abandonment of the previous ‘two war’ planning requirement. But upon closer inspection rather the opposite appears to be the case.”

The Urgent Need for More Applicability in Peace Economics

Walter Isard

In writing this brief paper, I shall resort to criticism (perhaps unduly harsh) of leading economists who may profess to be peace economists. While appreciating the major contributions these scholars have made to economic analysis, I remain critical in order to make clear the urgent need for new directions in making peace economics more applicable.

To start, I shall criticize my own work. Take the paper on page 9 following this article. It purports to be a succinct statement of the topics and concerns of peace economics. It states "Central to the field are analyses of conflicts among nations, regions and other communities of the world; measures to control (de-escalate) arms races and achieve reduction in military expenditures and weaponry. . ." The paper does cover a wide range of topics where contributions can and are being made in economics. But when I consider the current Northern Ireland conflict, the escalating Palestinian/Israeli violence, the bitter stalemate in Kashmir between India and Pakistan, two nations with nuclear bomb capability, I cannot help but ask: where is peace economics making a contribution?

I look at the books I have written and the excellent papers by the Nobelists and other distinguished economists on the board of directors at Economists Allied for Arms Reduction (ECAAR) where they do probe deeply into some of the topics covered in the attached page 9 paper. Still, I ask the same question: Where is our peace economics addressing the Northern Ireland, Palestinian/Israeli and India/Pakistan/Kashmir conflicts? With reference to the India/Pakistan stalemate, I read the brilliant analysis of Amartya Sen on "India and the Bomb," the very best and deepest analysis I have seen anywhere on the folly of deterrence. But where does this deep probe and others pointing out the very wasteful military expenditures taking place contribute to reducing (alleviating or tempering) this conflict or other arms escalating situations.

Of course one can reply, there needs to be more effective communication among real political leaders. These leaders, we well know, are not the rational players of game theory. There needs to be among these political figures more nuanced discussion, a term used by my esteemed colleague, Ravi Kanbur, who has authored a very incisive paper on the developing/developed nations conflict. Economists may reply that the problem of how to achieve effective communication between political leaders with vastly different goals, perspectives, cultural back-

grounds and sensitivities to the demands of their constituencies, falls outside the field of economics. But if we are to conduct peace economics, the use of the word peace means that communication between real political leaders cannot be ignored. Moreover, of the social science fields, economics has the most advanced set of tools, and therefore is obligated to probe this topic.

At this point, the reader may respond that this is just the author doing some more talking. Can he say anything about achieving some effective communication among political leaders? Yes, I think I can. I can indicate one of hopefully several directions that may be required. It is based on some of the creative and applicable concepts and analysis developed by the mathematician Thomas A. Saaty. Saaty has designated his approach an Analytic Hierarchic Process (AHP). The Saaty process, which I find convenient to redesignate a procedure, can be developed to provide very useful information, even if only rough. It involves obtaining, in a friendly, non-suggestive manner, information on the relative importance of each political leader's objectives, aims and goals (even prejudices) with respect to a given conflict situation as he/she perceives these objectives.

This is done by allowing each involved leader, or their knowledgeable representative(s), to make pairwise comparisons of his/her objectives. The comparisons are to be made in isolation from other leaders. One can then estimate the relative utility of each possible proposal for cooperative action. No interpersonal comparisons of the leaders' relative utilities are involved. Thus an analyst may be able to determine, at least roughly, whether a particular joint action of the leaders can yield for each an improvement over the current situation, however small. The stability of a joint action improvement can be examined. Of course, the inferred indifference curves (discrete or continuous) and other refinements that economists love to play around with can be constructed. But what is important is whether or not a stable joint action improvement is achievable.

The step-by-step process involved in this procedure cannot be presented in this short paper, though the short bibliography gives examples of its use. I cannot claim that this procedure can be of general use. Moreover, it cannot be expected fully to resolve a conflict. However, it can provide rough empirical materials that can help identify one or more joint actions, each of which can yield at least a

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From the Activist's Notebook: Thinking Geopolitically: NMD, Star Wars, and Control of the Heavens and the Earth Below

Bruce K. Gagnon

The horrible terrorist attacks on the World Trade Center and Pentagon will ensure that George W. Bush gets all the money he wants in 2002 for military expansion and Star Wars.

In opinion polls the day after the Sept. 11 tragedy, Americans by a margin of 9-1 were saying they were prepared for war to bring revenge on those responsible for the attacks. Though delayed it may be, a dangerous cycle of bloodletting is likely to follow, bringing even more reprisals.

But this is an article that challenges readers to question what the government has said as it pushes ahead with missile defense plans; it also asks readers to think geopolitically, for military expansion and the development of space-based weaponry may ultimately do more harm internationally than good.

By way of background, during his presidential campaign George W. Bush called for the creation of a "21st Century" military capability. He was speaking about the development of new weapons systems like the space-based laser (SBL). Since then it has been widely reported that he has asked Congress for \$8.3 billion in 2002 for research and development (R&D) to bring these systems into reality. It has not been widely reported however that the Space Command's planning document *Vision for 2020* and the recent Rumsfeld Commission report call for U.S. "control and domination" of space.

The controversial reports call on the United States to develop the weapons capability to "deny" other countries access to space. The Bush Administration and its aerospace corporation allies understand they cannot say the United States will "control and dominate" space. By selling the new Star Wars program as "missile defense," Bush hopes to disguise U.S. intentions to move the arms race into the heavens.

Missile Defense is a Trojan Horse

The appointment by Bush of General Richard Meyers as chairman of the Joint Chiefs of Staff is an indication of the direction the Pentagon is heading. Gen. Meyers, former head of the U.S. Space Command, will be responsible for consolidating support for the nuclearization and weaponization of space within the military and selling it to Congress and the public.

But missile defense is a Trojan horse, an image that should cause readers to pause. For years the Pentagon has told the American people, and the rest of the world, that it wants to protect them from attack by a so-called rogue state that might send a nuclear weapon toward the United States. Unfortunately the tragedy of Sept. 11 has made it easier for the Bush Administration to sell this argument.

Remembering that the number one industrial export of the United States today is weapons, it is clear that the aerospace industry stands to make historic profits if Americans can be convinced to spend their hard earned tax dollars on Star Wars. It is possible to conclude that before it is finished, the new Star Wars program will cost many hundreds of billions of dollars. (Already over \$120 billion has been spent on space weapons development since the Eisenhower Administration began work on the technologies with the help of ex-Nazi rocket scientists following WW II.)

Knowing that recent tax cuts will eat up the national budget surplus, it is easy to see that further funding for Star Wars will be paid for with money from human needs programs such as Social Security, health care, family farm subsidies, education, day care, and the like. Funding for the enforcement of the Endangered Species Act struggles to survive with a meager \$6 million annual appropriation while Star Wars rages on.

Managing China

When weapons are a country's number one industrial export, global marketing opportunities clearly benefit from regional instability. Today the United States sells arms to all sides in the Middle East and is now moving to expand U.S. military operations in the Asian-Pacific region where it is selling weapons to South Korea, Japan, Taiwan, Singapore, Indonesia, and Australia among others.

The *Washington Post*, in a May 26, 2000 article, stated that the United States will now begin to "manage China." Today the United States is widening and lengthening the runways on Guam and Wake Island in the Pacific to handle the B-1 and B-2 bombers. Cruise missiles are being prepositioned on Guam and a new program, Theatre Missile Defense (TMD), is being planned for deployment surrounding China.

China has 20 nuclear missiles capable of hitting the continental United States while the United States has 7,500 that could "hit" China back. Unlike Russia, which is now under the control of the IMF and World Bank and virtually surrounded by an expanding NATO, China remains the one independent actor in the world today not under U.S. corporate control.

TMD systems would be forward deployed in the air, on land, and sea and would allow the United States to virtually surround the coastal regions of China. TMD systems are designed to immediately hit missiles that are launched in what is called their "boost phase." Deploying TMD systems around China will force them to decide if they should respond by increasing their own military capability thus giving the U.S. weapons industry the ideal gift for larger markets — a new enemy and a justification for a new arms race.

The United States is also working with Israel and Turkey to introduce TMD systems into the Middle East, which will also provoke other regional powers to expand their capability to counter the TMD systems. All TMD systems will be coordinated via satellite technology in space.

Last January, the U.S. Space Command held a simulated computer warfare "game" set in the year 2017. The "Blues" (United States) went to war against the "Reds" (China). The Blue team launched a preemptive first-strike attack on China, using the military space plane, the planned successor to NASA's space shuttle. The space-based laser was used as the second military tool to destroy the Reds.

With current talk from the Bush Administration of launching a long-term war of reprisals against Osama bin Laden and Afghanistan, it is possible to speculate even further on this new strategy of the Pentagon. Afghanistan (which has large deposits of natural gas and coal) is bordered on the north by



Bruce Gagnon at Kodiak, Alaska test facility

Turkmenistan (natural gas), Uzbekistan (world's largest single gold mine, oil, natural gas, coal and uranium), and Tajikistan (uranium). It is not hard to imagine the United States and NATO setting up "permanent bases" in the region to wipe out "terrorism" that would in the end give the United States control of these resources. Looking at a map of the region, one can see the proximity of this region to the borders of China and Russia.

Lasers in Space

The SBL is a resurrected technology from Ronald Reagan's Star Wars vision: an orbiting battle station whose laser would knock out other countries' satellites in space and hit targets on the Earth below. Last December the Pentagon announced the start of the SBL testing program at NASA's Stennis Missile Center in southwest Mississippi. By the year 2012 they hope to deploy the first operational SBL to be eventually followed by a constellation of 18-48 of the weapons orbiting the planet. Power for the SBL would be provided by on-board nuclear reactors. The Pentagon estimates the SBL testing program will cost over \$30 billion.

Lockheed Martin, TRW, Boeing, and Raytheon are the top four Star Wars contractors. Their campaign contributions to Republicans and Democrats alike have paved the road for nearly unchallenged appropriations for R&D funding to pay for the many different space technologies now under way.

Today we hear many leading Democrats say they are opposed to deployment of National Missile Defense (NMD), the system designed to protect the continental United States from attack by hitting a bullet with a bullet while the "offending" missile is high above in deep space. (Interestingly, the Democrats voted overwhelmingly in support of deployment of missile defense in April, 1999. The House voted 345-71 and the Senate 97-3.) While Democrats routinely claim opposition to deployment of NMD, they strongly support deployment of Theatre Missile Defense systems, and some are pushing the "robust" R&D program for the whole Star Wars system.

Global Corporate Threat

The political consensus that TMD should be deployed in the Middle East and Asia has to be linked to global corporate interventionist policies that both political parties endorse. Calling TMD "a way to protect our troops and our ships," Washington views TMD as the shield to protect United States forces that currently enable unfettered U.S. access to oil.

The underlying issue at hand is U.S. corporate global control. The United States Space Command can be seen as the new military arm of corporate globalization. The *Vision for 2020* states that due to current economic realities the gap between "haves and have nots" will be widening in coming years. As a result, the Space Command suggests that there will be more regional instability as workers organize to oppose slave labor working conditions and a loss of democratic rights. By developing the new 21st Century program of "control and domination" from space, the Pentagon intends to suppress instability in "regional" hot spots without having to commit major troop deployments.

Plan Columbia today is coordinated by U.S. military space satellites (also at the cost of hundreds of billions of dollars) that are able to identify movements of fighters on the ground and direct attacks against them. All warfare on the earth is now coordinated from space. Those who control space will be in a position to control the earth — thus the Space Command's motto "Master of Space."

The Global Network Against Weapons & Nuclear Power in Space has been working since 1992 to create a new consciousness about space and how it is being used for U.S. military control of the earth. When we look up at the moon on a clear night we must remember that for centuries humanity has marveled at the mysteries of the heavens. We must create a global movement that says we shall not move the bad seed of war into space. We must keep space for peace.

Bruce K. Gagnon is the International Coordinator of the Global Network Against Weapons & Nuclear Power in Space. The Vietnam-era veteran coordinated the Florida Coalition for Peace & Justice for 15 years and organized the Cancel Cassini Campaign to oppose the launch of plutonium into space.

Resources

The following resources may be obtained from the Global Network:

????Space Organizers Packet - \$5 (includes a copy of *Vision for 2020*)

????Karl Grossman's new book entitled *Weapons in Space* - \$8

????Bruce Gagnon's video of his *Keep Space for Peace* presentation - \$18

Check the Global Network website at: www.space4peace.org
Global Network Against Weapons & Nuclear Power in Space
PO Box 90083, Gainesville, FL. 32607

Eliminating Prime Targets of Terrorism: Russian Chemical Weapons Destruction

Paul F. Walker

The recent White House announcement that terrorist networks, including the Al Qaeda cells of Osama bin Laden, are actively seeking weapons of mass destruction — nuclear, chemical, and biological — should come as no surprise to most observers. The mailings of anthrax spores in the United States since September 11th have made it abundantly clear that innovative and technically skilled criminals and terrorists are able and willing to utilize a variety of nondiscriminatory terror weapons to make their points.

What is surprising is that a five-year U.S. effort to help Russia destroy its vulnerable stockpiles of 40,000 tons of chemical weapons (CW) has this month met surprising opposition within the Department of Defense. Secretary of Defense Donald Rumsfeld issued a memorandum in November to halt support for the destruction of 5,400 tons of Russian nerve agent stockpiled just north of Kazakhstan. While this move is unlikely to be the final answer from the Bush Administration, which up to now has supported elimination of Russian chemical weapons, it illustrates well how irrational, ideological, and bureaucratic the response to terrorism can be.

I undertook an official on-site inspection of the easternmost of seven major Russian chemical weapons stockpiles in 1994, early in the new U.S. Cooperative Threat Reduction (CTR) Program. This bipartisan program, founded by Senators Sam Nunn and Richard Lugar to help post-Cold War Russia destroy its large arsenals of nuclear, chemical, and biological weapons, has committed some \$400-500 million annually for almost 10 years now to meet this enormous challenge. It has been successful in destroying thousands of nuclear weapons, launch systems, and production facilities; building secure storage facilities for weapons-grade nuclear materials; constructing laboratories for overseeing safe destruction techniques; and designing a major chemical weapons destruction facility for Shchuch'ye, the site of my 1994 CTR inspection.

Shchuch'ye is in the Kurgan Oblast and lies between the regional capital, Kurgan, and the larger city of Chelyabinsk. It's about a 1,500 mile flight southeast from Moscow, over the Ural mountain range that separates European from Asian Russia. This is one of the largest and most battlefield-ready of the Russian CW sites, containing both artillery shells and missile warheads filled with deadly nerve agent. The family of nerve agents is one of the most deadly in Russian, American, and other chemical weapons arsenals. One drop on the skin or inhaled is sufficient to induce convulsions and death within a few minutes. The last known use of this type of agent was in the 1995 Tokyo subway attack when the Japanese terrorist network, Aum Shinrikyo, killed 12 subway riders and injured some 5,000 others.

The Shchuch'ye stockpile was chosen by the Russian Ministry of Defense and the U.S. Cooperative Threat Reduction Program five or more years ago as the first Russian site to be destroyed because of its battlefield-ready arsenal and also because of its vulnerable location to the Asian subcontinent in the "Stans" — Kazakhstan, Uzbekistan, Tajikistan, and Afghanistan. Since September 11th, the vital importance of destroying this arsenal has become all the more clear.

Shchuch'ye's millions of artillery shells are warehoused in dozens of above-ground, poorly maintained, corrugated metal and

wooden buildings in three-meter-high shelving that looks like wine racks. When I walked through several of these warehouses in 1994, some racks were filled, some half-filled, and some empty. When I asked the commanding officer how they maintained confidence in the inventory, he responded that they kept the barndoors locked at all times. Unfortunately, the locking mechanism on these buildings were simple bicycle locks.

The two-meter-long missile warheads, especially impressive in size and weight, sit on the floor of identical warehouses on railroad dollies, ready for rail transportation to missile sites and mating with Russian Frog and Scud missiles such as we saw Iraq fire at Israel and coalition forces in the Gulf War.

The Russian, European, and American governments have long been concerned over the lack of security of these Russian chemical weapons sites and the resultant vulnerability of the shells and warheads to theft, diversion, and proliferation. It is for this reason that a CTR program for destruction was created in the mid-1990s and directed primarily at the Shchuch'ye site.

The Cooperative Threat Reduction Program has committed some \$200 million to date to design, test, and scale-up Russian technologies for the safe and environmentally sound demilitarization of this stockpile. At present, the two-stage technology of neutralization (mixing the nerve agent with a caustic reagent) and bituminization (solidifying the resultant liquid with an asphalt mixture and storing it in sealed, retrievable sites as toxic waste) has been successfully scaled up, and full facility design plans are close to completion.

This program, however, has suffered from political attacks in recent years that need now to be overcome. The first problem has been the fact that the House Armed Services Committee in Congress has been successful in zeroing out administration funding requests of \$130 million and \$35 million in FY00 and 01 respectively. The primary reasons given were that some HASC members and staff saw the program as more a domestic "environmental" problem for Russia than an international security issue; that the Russian government was not placing sufficient priority on the program itself; and that our European allies were not participating adequately.

Since then the Russian government has responded positively to congressional concerns and reorganized its bureaucracy into a new superagency, the Russian Munitions Agency, led by Dr. Zinovy Pak, a respected take-charge manager. Pak has also been successful in expanding annual Russian funding to over \$120 million, some six times prior Kremlin and Duma commitments. Also important is the fact that a dozen European countries, after some very active lobbying and outreach by governments and NGOs — including Mikhail Gorbachev's Green Cross — have now committed some \$150 million to the Shchuch'ye project and the other six Russian CW stockpile sites. Germany, for example, is constructing a pilot destruction facility at the Gorny lewisite stockpile in the Saratov Oblast. Italy has agreed to construct utility pipelines in the Kurgan Oblast. And Britain has pledged some \$18 million to the project.

This has apparently not been sufficient for hardliners in Congress, however. This past summer the House Armed Services Committee once again planned to delete

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Russian Chemical Weapons *(from previous page)*

restored by unanimous consent in the full HASC markup when proposed by the senior bipartisan team of congressman Curt Weldon and congressman John Spratt.

The Senate, in both its Republican and Democratic majorities in recent years, has been very supportive of the Russian CW destruction project. The White House has also weighed in recently as part of its anti-terrorism campaign. The State Department, committed to meeting the legal requirements of the international Chemical Weapons Convention requiring full abolition of U.S. and Russian CW stockpiles by 2012, is also supportive of moving forward with construction at Shchuch'ye. Yet, it's apparent that Cold War ideologues who had opposed the 1997 ratification of the CWC, are still trying to wage war on the project from the Pentagon.

This issue may indeed be resolved once and for all at the Putin-Bush summit. Regardless, it will be important for the public to demand that the Shchuch'ye stockpile be destroyed on an accelerated schedule and that both Russian and American chemical weapons be securely stored and destroyed safely and expeditiously over the coming decade.

What needs to happen, in short, is the following. (1) The Bush Administration and the U.S. Congress need to make clear that destruction of the Shchuch'ye CW stockpile is a top priority for U.S. and global security and that funding will be forthcoming for

FY02 and beyond. (2) The CTR program director, Gen. Thomas Kuenning, must be given reprogramming authority in order to allow sufficient funds to flow to the project based on accelerated construction schedules. (3) The Russian government must continue to work cooperatively with the United States and other governments and contractors and, as required by Congress, must continue its annual funding commitment. (4) European governments, as required by Congress, must also continue to support the project. And (5), U.S. and international development agencies must also participate in helping build a sustainable economy in the Kurgan region and thereby indirectly supporting the demilitarization project.

Only by abolishing chemical weapons globally and permanently establishing a long-lasting taboo for the use of weapons of mass destruction will we all be more secure. Support for Russian and American chemical weapons destruction programs is one of the very best investments in U.S., Russian, and global security for the 21st century.

Paul F. Walker is Legacy Program Director of Global Green USA, the American affiliate of Green Cross International founded by Mikhail Gorbachev. The Legacy Program of Global Green USA, Green Cross Russia, Green Cross Switzerland, Green Cross Belarus, and Green Cross Ukraine, advocates and facilitates the safe and environmentally sound destruction of Cold War weapon stockpiles and full implementation of arms control agreements. Walker can be reached in Washington, DC at 202-879-3181, pwalker@globalgreen.org, and www.globalgreen.org.

Bush-Putin Summit *(Continued from page 1)*

When the Bush Administration took office, it pulled back from the Clinton plan and announced that the Pentagon would pursue research on a wide variety of missile defense systems and decide later which of these were suitable for deployment. The Bush administration has claimed that the United States needs "relief" from the ABM Treaty to proceed with its development and testing program. This is a specious claim: while testing of sea-based or space-based systems is prohibited by the treaty, the United States is nowhere near ready to conduct tests of such systems.

As the FY2002 defense budget shows, the Clinton ground-based midcourse hit-to-kill system remains the core of current missile defense plans. Thus, while sea-based boost-phase missile defenses will receive \$25 million, the midcourse system will receive some \$3.2 billion.

The treaty would stand in the way of deployment of this system, but the United States will not finish the planned test program for at least five years. It is not yet clear whether the planned test program will incorporate enough realistic testing, but the information needed to make a well-informed deployment decision will not be available for at least five years. Thus, the treaty need not be an issue for several years.

The real urgency for the Bush Administration to leave the ABM Treaty has nothing to do with testing. Next spring the Pentagon plans to begin building five missile silos for interceptor missiles at Fort Greely, Alaska, with the goal of having these interceptors serve as part of an "emergency defense" by 2004. This would ensure that President Bush would deploy *something* before his first term in office expires. (For more detail, see "The Alaska Test Bed Fallacy: Missile Defense Deployment Goes Stealth," *Arms Control Today*, September 2001, pp 3-9. Available at www.armscontrol.org/act/2001_09/gronlundwrightsept01.asp).

The Ballistic Missile Defense Organization (BMDO) has

argued that these interceptors would be part of a new "Alaska test bed" that is needed to improve the test program, and would fund these activities out of the research—rather than procurement—category of the budget. However, these silos would not be used to launch interceptor missiles during tests. For safety reasons, the United States does not launch long-range missiles from an inland site. Indeed, the Pentagon has stated that test launches cannot be conducted from Fort Greely because it is too near populated areas. Thus, interceptors at Fort Greely would in no way be useful to a flight-test program. (Congress was moving to block funding for Fort Greely, but these efforts were dropped following the September 11 terrorist attacks.)

At the same time, the five interceptors at Fort Greely would have very limited utility as a defense system, in part because no missile defense radar will be deployed in Alaska to enable the system to discriminate the warhead from debris and even simple decoys.

To permit silo construction at Fort Greely to begin next spring, the United States would need to give its six months notice of withdrawal sometime by late 2001. And, prior to September 11, President Bush had made several statements indicating the United States would withdraw from the ABM Treaty "at a time convenient to America."

However, global politics have changed since September 11, and President Bush appears to recognize that unilateral withdrawal from the treaty would likely harm the anti-terrorism coalition his administration has worked to create. Whether President Bush is willing to put aside the Pentagon's Fort Greely deployment plans to avoid a rift with Russia in the near term remains to be seen, but the chances are greater now than they were several months ago.

At a deeper level, the lack of a *(Continued at bottom of page 8)*

Peace Economics *(continued from page 3)*

small improvement for each leader as he perceives the situation and the implications of a joint action proposal. This also can be useful in building up trust, a factor considered essential by so many scholars and mediators.

In the case of the conflict on the Korean peninsula, a proposal developed in this way has yielded, however indirectly, a small joint action that "broke the ice." This first joint venture between the Koreans, a recreational facility near the demilitarized zone, has led in recent years to larger reductions in the conflict.

In closing, I wish to state that the above is only one of several directions that peace economists must pursue if they are to live up to the implications of the term peace economics. I hope there do exist other directions of analysis of real world political behavior of which I am not aware. The use of "pure economics" (as covered on page 9) without including such analysis is clearly not enough.

While the article on page 9 mentions political variables and refers to decision making and behavior of political figures, it does so only in the sense that coverage of such decision making and behavior is desirable. However, it is not able to refer to analysis of the real type of decision making and behavior discussed below, which is urgently needed.

In conclusion, peace economics is a newly emerging field of study. It is generally concerned with (1) resolution management, or reduction of conflict in the economic sphere, or among behaving units in their economic activity; (2) the use of economic measures and policy to cope with and control conflicts whether economic or not; and (3) the impact of conflict on the economic behavior and welfare of firms, consumers, organizations, government and society. Central to the field are analyses of conflicts among nations, regions, and other communities of the world; measures to control (de-escalate) arms

and achieve reduction in military expenditures and weaponry; and programs and policies to utilize resources thus released for more constructive purposes. See the article on page 9 for more suggestions of how economic theories and econometric applications can serve the cause of peace.

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Bush-Putin Summit *(continued from page 7)*

summit "deal" on missile defenses demonstrates that Russia still has concerns about US missile defense plans—concerns that are legitimate given the US-Russian nuclear relationship. Bush is eager to convince President Putin that the end of the Cold War means that US missile defenses should not worry Russia. But Russia cares about US missile defenses because the United States continues to rely on its Cold War strategy and continues to target thousands of nuclear weapons on Russia.

During the presidential campaign, Bush said that "the premise of Cold War nuclear targeting should no longer dictate the size of the US arsenal." Yet Cold War thinking remains institutionalized in US nuclear targeting plans, which require the United States to have enough highly accurate weapons to target and destroy Russian missiles in their silos. Only a few hundred nuclear

weapons are needed to destroy a country the size of Russia. No current or conceivable future threat requires the United States to maintain more than a few hundred survivable warheads. The only reason the United States would retain 2,000 warheads is to target Russian nuclear weapons.

Bush cannot fundamentally change the US-Russian nuclear relationship by building missile defenses and abandoning arms control agreements while keeping thousands of nuclear weapons on alert and ready to be targeted at Russia. Until the United States fundamentally changes its nuclear policy with respect to Russia, it will face not just substantial technical barriers to developing effective defenses against long-range missiles but also deep political opposition to their deployment by Russia.

Lisbeth Gronlund is a senior staff scientist at the Union of Concerned Scientists and a research fellow in the MIT Security Studies Program.

Economic Theories and Econometric Applications Help to Achieve Goals

Walter Isard

To achieve its goals, peace economics must cover understanding of the behavior of individuals and groups of individuals ranging from the local community up to the nation, alliances of nations, and international organizations such as the United Nations and GATT. It draws upon utility, production, public choice, and welfare theories — theories at both the micro and macro level, involving both practical and general equilibrium/disequilibrium frameworks. Also it embodies game-theoretic, strategic, and other reaction-interaction analyses among parties, wherein hostility and friendliness, and cooperation and defection are involved. Behaving units are taken to engage in appropriate activities (for example, military ventures) as well as productive activities, with war often viewed as a rational, purposeful choice of decision makers.

During the Cold War era, much investigation was devoted to models of deterrence attack capability, the inherent propensity for certain types of weaponry to lead to escalation of arms races, the need for the development of non-threatening weapon systems, and procedures for qualitative arms control. With the demise of the Cold War and the relaxation of controls on developing nations by the former Soviet Union and the United States, concern has arisen with the emergence of arms races among developing nations and their acquisition of nuclear weapons.

At the empirical and applied level, a number of econometric, computable general equilibrium and other studies have examined the impact, particularly at the national level, of military expenditures on inflation, unemployment, budget deficits, trade and balance of payments, and the general problem of allocation of resources between military and peacetime (social-welfare) programs. Along with those have been analyses of the effect of political conflict upon trade and of trade upon the hostility of nations. Numerous input-output investigations have examined the impact of increases and cutbacks of military expenditures on output and employment by economic sectors at national, regional, and local levels. Closely associated with these have been studies concerned with conversion of defense-oriented activities to peacetime operations with the retraining of workers employed in such activities, the retooling of plant and equipment and restructuring of industry, the reorientation of management to a competitive market economy, and the identification of desirable and effective offset programs. A most recent development is the incorporation of arms-race models and political variables in econometric, input-output, and potentially computable general equilibrium models of the world economy.

Another major line of inquiry relates to the impact of arms expenditures on the level of investment in the civilian economy. In particular, is there a negative impact and a consequent slowdown in the growth of the national economy? Economic warfare studies stem from such considerations. Further, are military R&D expenditures made at the expense of civilian expenditures, and is the resulting increase in industry and overall national productivity significantly less, even though the spillover effects of the former may be major? With regard to developing countries a hotly debated thesis is that arms production is job-creating, develops a market for the product of domestic firms, and stimulates the acquisition of labor skills and entrepreneurship, all of which spark and foster industrialization.

Other specific topics with which peace economics is concerned are guerrilla warfare, terrorism, and revolution as means to achieve ends; the expected utility of war; the effectiveness of economic sanctions, boycotts, and embargoes; alliance behavior and burden sharing; the properties of particular games like prisoner's dilemma, hawk/dove and chicken; particular arms-race models (e.g., the pre-World War I British/German dreadnought race); case studies of the effects of military expenditures in a given nation (e.g., India); the nature and scope of international arms trade, organizational politics models involving resource allocation; lobbying efforts, particularly of the military-industrial complex; the effectiveness of arms expenditures as a counter-cyclical force; the probabilistic and non-probabilistic models of war initiation, maintenance and termination; the pollution aspects of military operations; the benefits and costs for each participant in a violent outbreak; and the economics of an international police force. Peace economics is distinct from defense economics, which has been primarily concerned with the efficient operation of a defense establishment (e.g., the Department of Defense), its budgeting process and weapons procurement, and missile war simulations to evaluate deterrence and attack capabilities of different weapon systems and their cost efficiency.

Another major concern of peace economics is with conflict management procedures (CMPs). Such procedures (e.g., veto incremax, max the min in rank improvement, and determination of priorities) involve extensions of Cournot/Edgeworth frameworks, oligopoly theory, game theory, coalition analysis, programming methods, and other economic tools.

As with those in many other areas of social science, law, and other professions, peace economists have explored possibilities for institutional change, particularly that which could influence the operation of key economic forces in the national and world systems -- e.g. foreign aid and the financial support of development projects that can significantly affect internal unrest and the hostility a nation levels at its neighbors and others.

Leading figures in the field have been Jan Tinbergen, Wassily Leontief, and Kenneth Boulding, all of pre-World War I vintage. Since the early 1980s, the Peace Science Society (International) has been organizing conflict and peace economics sessions jointly with the American Economics Association at the latter's annual convention; and recently ECAAR has focused the interest of many outstanding economists, including a number of Nobel laureates, on critical peace issues.

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Walter Isard, a trustee of ECAAR, is a professor at Cornell, and founder of the Peace Science Society International. His most recent book on peace research is entitled "Understanding Conflict and the Science of Peace," published in 1992 by Blackwell, Cambridge, MA.

Understanding Terrorism

Lloyd J. Dumas

The devastating terrorist attack that struck the United States on September 11, 2001 shattered New York's massive World Trade Center, a piece of the Pentagon, thousands of innocent lives, and the illusion that sophisticated technology and powerful weapons could keep us safe.

Thousands of ordinary people became the victims of an enemy who cared nothing about our fleets of warships, bombers and missiles — an enemy who turned the fruits of our own technological brilliance against us.

Of course, terrorism is not new to the United States. More than a century before Timothy McVeigh brought down the Federal Building in Oklahoma City with a truck bomb, the Ku Klux Klan was committing widespread terrorist violence. New York's World Trade Center itself was the target of an international terrorist attack in 1993. What was different about September 11 was chiefly the scale of the carnage. But that is a very important difference.

Sub-national terrorists have now entered the realm of mass destruction. As bad as they were, the attacks of September 11 could have been worse. Terrorists might yet get their hands on weapons of mass destruction. Bio-weapons were on the minds of terrorists long before the recent anthrax attacks. In 1995, a member of the American white supremacist Aryan Nations pled guilty to buying three vials of frozen bubonic plague bacteria --- by mail. That same year, the Japanese Doomsday cult Aum Shinrikyo killed a dozen people and injured thousands more by releasing nerve gas in the Tokyo subways. And there is some evidence that that was a dress rehearsal for much larger attacks the cult was planning for 1996.

All the information necessary to design a crude, inefficient nuclear explosive --- many times as powerful as the Oklahoma City bomb --- has been publicly available for decades. In 1996, *Time* reported that scientists at Los Alamos designed and built more than a dozen terrorist-type nuclear weapons using

“technology found on the shelves of Radio Shack and the type of nuclear fuel sold on the black market.”

Terrorists might also be able to steal or buy a ready-made weapon. In 1997, Russian General Alexander Lebed claimed Russia had lost track of some 100 “suitcase” nuclear bombs.

Terrorists could also escalate the level of destruction by conventionally bombing an industrial toxic chemicals plant, a nuclear power plant, or a toxic chemical or nuclear waste storage area. This thought has not escaped their minds --- there were almost 700 bomb-related threats against U.S. nuclear facilities from 1976-1994. The fourth jetliner that crashed in Pennsylvania during the barrage of hijackings on September 11 was looping back toward and went down about 120 miles from the Three Mile Island nuclear power plant.

Fighting Terrorism

In the short run, terrorism is most effectively fought by improved intelligence, greater international cooperation and a far better understanding of the character of terrorist groups.

In the long run, the best way to end terrorism is to drain the pool of marginalized and humiliated people from which demagogues like Osama bin Laden recruit people so frustrated that they are willing to die to strike a blow against those they hold responsible for their pain. That cannot be done with military strikes — or better police work. It can only be done by helping them to develop economically and politically, by taking their economic and political rights just as seriously as we take the rights of those whose worldview aligns more closely with our own.

No one who feels that they and their people are respected and taken seriously by the world flies airliners into buildings.

Lloyd J. Dumas, a member of the ECAAR Board of Directors, is professor of political economy, University of Texas at Dallas, and the author of the recent book, “Lethal Arrogance: Human Fallibility and Dangerous Technologies.”

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Friday, Jan. 4, 230 PM in the Atlanta Marriott Marquis, Magnolia Room

National Missile Defense and New Global Threats

Presiding: Michael D. Intriligator

Panelists: Kenneth J. Arrow, James K. Galbraith and Walter Isard

Discussants: Richard F. Kaufman and Lloyd J. Dumas

Saturday, Jan. 5, 8 AM in the Atlanta Marriott Marquis, Shangri-la Room

New Developments in Economics and Security: Globalization, Industrial Restructuring, and Development

Presiding: Richard Jolly

Panelists: Lawrence R. Klein, David Gold, Ron Smith, John Lovering and Claude Serfati

Discussants: Jurgen Brauer, Paul Dunne, Todd Sandler and Solomon Polachek

Saturday, Jan. 5, 4:45 PM to 6:00 PM in the Atlanta Marriott Marquis, Calgary Room

ECAAR Annual Membership Meeting

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Saturday, Jan. 5, 730 PM in the Atlanta Marriott Marquis, Monte Carlo Room

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*See page 12
for details*



Joseph E. Stiglitz

Joseph E. Stiglitz, New Nobel Laureate, to Host and Speak at ECAAR Seminar/Reception

Joseph E. Stiglitz, an active member of the ECAAR Board of Directors, will host and speak at a seminar/reception at his home in New York on Wednesday, February 20, 2002. See the announcement on page 8 for details.

An Ongoing Role in ECAAR

Dr. Stiglitz's contribution to the work of ECAAR has included major papers for ECAAR panels at AEA/ASSA conferences. In January 2000, a paper prepared jointly with David Ellerman "On New Directions in the Russian Reforms" was part of the ECAAR panel on Russia attended by some 250 participants at Boston. During the 2001 AEA conference in New Orleans, he was a speaker on the ECAAR panel "Toward a Post-Washington Consensus on Development and Security," revisiting topics first raised in his important 1998 paper, "More Instruments and Broader Goals: Moving Toward the Post-Washington Consensus." He was also a featured speaker at the annual dinner in New Orleans. In February 2002, Dr. Stiglitz will address a seminar/reception to promote *The ECAAR Review*, ECAAR's new, flagship publication on military spending and policies worldwide.

2001 Laureate in Economic Sciences

On October 10, 2001, the Royal Swedish Academy of Sciences awarded the Nobel Prize in Economic Sciences jointly to George A. Akerlof, A. Michael Spence, and Joseph E. Stiglitz.

In their press release, the Nobel Committee cited Stiglitz's work as clarifying a "type of market adjustment, where poorly informed agents extract information from the better informed, such as the screening performed by insurance companies dividing customers into risk classes by offering a menu of contracts where higher deductibles can be exchanged for significantly lower premiums. In a number of contributions about different markets, Stiglitz has shown that asymmetric information can provide the key to understanding many observed market phenomena, including unemployment and credit rationing."

Dr. Stiglitz is professor at Columbia University with joint appointments in the Business School, the Graduate School of Arts and Sciences (in the Department of Economics), and the School of International and Public Affairs. From 1997 to 1999, he served as the World Bank's chief economist and senior vice president for development economics. He served as chairman of the U.S. Council of Economic Advisors in the Clinton Administration, from 1993 to 1997.

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