

LA-UR-96-1896

CONF-960448-1

Title:

Plus C'est la Meme Chose: The Future of Nuclear Weapons in Europe

Author(s):

Steven A. Maaranen

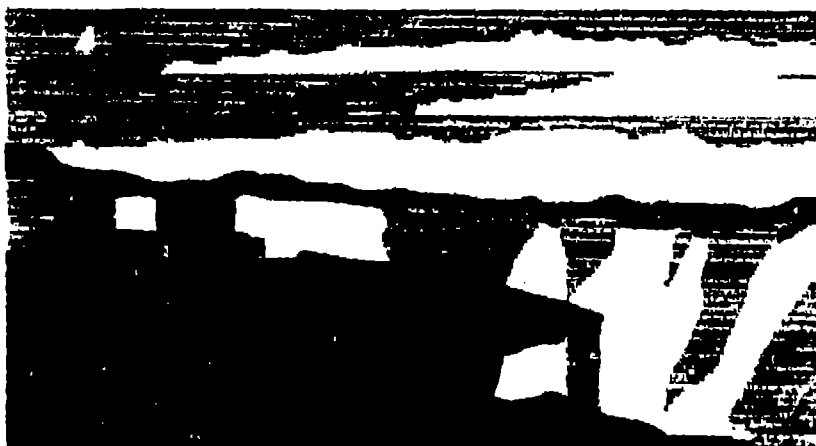
RECEIVED

MAY 31 1996

OSTI

Submitted to:

OS-6



**Los Alamos**  
NATIONAL LABORATORY

Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the University of California for the U.S. Department of Energy under contract W-7405-ENG-36. By acceptance of this article, the publisher recognizes that the U.S. Government retains a nonexclusive, royalty free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Governmental purposes. The Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy.

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

**MASTER**

Form No. 636 P1  
ST 2000 1001



## **Plus C'est la Meme Chose: The Future of Nuclear Weapons in Europe**

Steven A. Maaranen<sup>1</sup>  
Center for International Security Affairs  
Los Alamos National Laboratory

Since the end of the Cold War, the United States perhaps more than any other nuclear weapon state has deeply questioned the future role of nuclear weapons, both in a strategic sense and in Europe. It is probably the United States that has raised the most questions about the continuing need for and efficacy of nuclear weapons, and has expressed the greatest concerns about the negative consequences of continuing nuclear weapons deployment. In the US, this period of questioning has now come to a pause, if not a conclusion. In late 1994 the United States decided to continue to pursue reductions in numbers of nuclear weapons as well as other changes designed to reduce the dangers associated with the possession of nuclear weapons. But at the same time the US concluded that some number of nuclear forces would continue to be needed for national security for the foreseeable future. These necessary nuclear forces include a continuing but greatly reduced stockpile of nuclear bombs deployed in Europe under NATO's New Strategic Concept. If further changes to the US position on nuclear weapons in Europe are to occur, it is likely to be after many years, and only in the context of dramatic additional improvements in the political and geo-political climate in and around Europe. The future role of nuclear weapons in Europe depends in part on past and future decisions by the United States. But it must also be noted that other states that deploy nuclear weapons in Europe -- Britain, France, and Russia, as well as the NATO alliance -- have shown little inclination to discontinue their deployment of such weapons, whatever the United States might choose to do in the future.

### **The US, Nuclear Weapons, and the End of the Cold War**

During the 1970s and 1980s, the United States became more and more discontented with the intense US-Soviet nuclear arms competition, as it failed to provide any enduring improvement in US security and rather was seen as creating ever greater risks and dangers. Arms control negotiations and limitations, adopted as a means to reduce pressures and regulate the technical competition, perhaps relieved some of the political pressures and dangers as well. But the implacable hostilities of the Cold War continued. The Strategic Defense Initiative (SDI) under President Reagan was a very different approach to escaping from the precarious protection of nuclear weapons, in that it sought an approach that would continue to defend the US and the West, but without the catastrophic risks of mutual deterrence. Whatever its merits or shortcomings, SDI connoted American unhappiness with the precarious nuclear balance and for many, with nuclear weapons in general.

The rapid, unexpected demise of the Warsaw Pact, the Soviet Union, and the Cold War seemed to many Americans to offer boundless opportunities for refashioning the world into a better and more secure place. A widely popular (and misinterpreted) article at the time, titled "The End Of History", argued that the collapse of communism signaled the end of ideological struggle and the ultimate success of the idea of Western liberal idea in the world. Although mistaken, this argument was emblematic of the euphoric and utopian mood that overtook many who had been single-mindedly dedicated to the struggle against the Soviet Union.

---

<sup>1</sup> The views expressed herein are the author's alone. They do not represent those of the University of California or the United States government.

Since nuclear weapons had emerged in response to and as the central security element of the Cold War, it seemed natural that reconsidering, indeed refashioning the place of nuclear weapon in national and international security should be a first order task, although there was plenty of disagreement about what the "new world order" would or should look like. As Russia turned in the direction of democracy and a market economy, and continued to pursue both negotiated and unilateral nuclear arms reductions, it became possible to think that the drawdown on nuclear weapons could proceed much farther, some even suggested that nuclear weapons might be eliminated altogether, or at least repudiated as legitimate tools of international relations.<sup>2</sup> For example, a major study by the US National Academy of Sciences in 1991 concluded that US nuclear weapons could be reduced safely to 1,000 to 2,000 weapons.<sup>3</sup> A study for the Atlantic Council of the United States, while endorsing similar reductions, claimed that "for the first time since the nuclear arms era began, it is now conceivable that at some future time nuclear weapons could go the route we hope to see chemical and biological weapons go in the short term."<sup>4</sup>

While reducing the nuclear threat would be a dramatic achievement in itself, some believed that establishment of a less confrontational world order and the end of the superpower nuclear confrontation would also allow the United States to retrench into a more measured global role. Certainly there were many problems at home that needed tending, and the 1992 presidential election demonstrated that those who coined the phrase, "its the economy, stupid", best understood the nation's leading concerns. In particular the end of the Cold War strengthened the position of those who that Europe could, and should, take over more of its own security needs, and that the United States should play a continued but less prominent role in European security.

While there was much optimism about the future security environment, cautions began to be raised that the end of the Cold War would bring some challenges along with its promises. The order that had been imposed on the East and the West by the Cold War had done much to contain and dampen regional tensions, as well as opportunities for states to seek to acquire their own weapons of mass destruction. The end of the Cold War posed the risk that regional tensions and proliferation pressures would emerge, posing new threats to global stability and national interests. This led the United States to place new emphasis on preventing nuclear proliferation, in fact to argue that proliferation was the number one threat to US national security interests. Coupled with traditional nuclear proliferation concerns were worries that the enormous nuclear weapons arsenal, materials, and expertise of the Soviet Union would leak out to potential proliferators in the disorder that followed the dissolution of the Soviet Union. This immediate problem put urgency and even greater impetus behind US non-proliferation policy. Addressing proliferation problems further highlighted the risks and dangers associated with nuclear weapons, and tended to place new emphasis on the long-standing argument that steps toward disarmament by the nuclear weapons states was a precondition for an effective non-proliferation regime.

Finally, the argument emerged that the United States, at least, would be better off in a world without nuclear weapons, if only that were possible. Les Aspin Chairman of the House Armed Services Committee and soon to be Secretary of Defense, wrote in 1992 that

---

<sup>2</sup> For an excellent summary of US attitudes toward nuclear weapons following the Cold War, see Stephen A. Cambone and Patrick J. Garrity, "The Future of US Nuclear Policy," *Survival*, vol. 36, no. 4, winter, 1994-1995, pp. 76-99.

<sup>3</sup> Committee on International Security and Arms Control, National Academy of Sciences, *The Future of the U.S.-Soviet Nuclear Relationship*.

<sup>4</sup> The Atlantic Council of the United States, consultation paper by Andrew J. Goodpaster, *Tighter Limits on Nuclear Arms: Issues and Opportunities for a New Era*, p. 22

"during the Cold War, the United States and its NATO allies relied on nuclear weapons to offset the conventional superiority of the Warsaw Pact in Europe. . . . Today, however, . . . the United States is the biggest conventional force on the block. Nuclear weapons still serve the same purpose -- as a great equalizer. But it is the United States that is now the potential equalizee." That meant that "Today, if offered that magic wand to eradicate the existence and knowledge of nuclear weapons, we would very likely accept it"<sup>5</sup> This attitude, favoring deep nuclear reductions and installing nuclear proliferation as the leading US nuclear concern, informed much of the American nuclear debate in the early post-Cold War years.

### A Policy of "Leading and Hedging"

With such views as background, Secretary of Defense Aspin began a major review of US nuclear forces and policies, which concluded in late 1994. It was clear that many officials in government and analysts outside government believed that the "Nuclear Posture Review" would and should call for major changes in US nuclear policy: substantial further reductions in nuclear weapons, a no-first-use pledge, commitments to future reductions linked to nonproliferation objectives, and so on. Most importantly, many sought a clear indication that the United States sought to place nuclear weapons on the path of ultimate extinction.

Instead, the review reached a more balanced conclusion: that further reductions in nuclear weapons should proceed, and that the United States should lead efforts toward a less-nuclear world; but at the same time, the study acknowledged that nuclear weapons were not going to disappear from the world. The United States would need to continue to rely on nuclear weapons for its security, although the role of nuclear weapons would be reduced. The most noted aspect of the study was the plan presented for reducing US nuclear forces down to the 3,500 weapons called for by the START II Treaty. Pentagon spokesmen pointed out that, if developments in Russia continued to be favorable, the plan was flexible enough to allow for further reductions. The study also endorsed a number of measures to increase the safety and security of US nuclear forces, including taking nuclear-armed bombers off alert, "de-targeting" ICBMs and SLBMs, and installing permissive action links on SLBMs. The "hedge aspect of the policy entailed retaining the capability to return to higher levels of alert and deployed forces if the threat to the United States did not continue to decline as anticipated, or in the face of a re-emergent threat.

Since 1994, the US attitude toward nuclear weapons and related issues has followed this "lead and hedge" approach. The US is continuing to draw down its strategic nuclear forces rapidly to the START I treaty limits. Recently, the Senate has ratified START II, and the US government is encouraging the Russian parliament to do the same. The US is committed to opening discussions for further reductions once START II enters into force. So far, however, there has been little discussion and certainly no agreement in the United States about what should follow START II, and uncertainty on this issue has probably grown over the past several months in step with concerns about the future path of Russia, and growing doubts about the role of China in the next century.

The United States has also been very active in efforts to discourage the further spread of nuclear weapons and other weapons of mass destruction. The United States chose to play a leading role in securing the indefinite extension of the Non-Proliferation Treaty, and has taken very forward, sometimes controversial, positions in trying to impede the nuclear weapons aspirations of states such as Iraq, North Korea, and Iran.

<sup>5</sup> Les Aspin, *From Deterrence to Denial: Dealing with Proliferation in the 1990s*, Feb. 18, 1992, p. 4.

The United States has taken note of, and to some degree shares, the opinion that there is a conflict between the determination of the United States to rely on nuclear weapons for its own security while actively seeking to deny nuclear weapons to additional states. It is likely that the motives for states to acquire nuclear weapons are more complex than this argument implies, and that the example of the nuclear weapons states is a modest factor in the calculations of would-be proliferators. Still, the United States has adopted several positions designed to demonstrate its compliance with Article 6 of the NPT, which calls on signatories "to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament". In addition to the nuclear arms reductions that have been undertaken, both unilaterally and by treaty, the United States has led the nuclear weapons states at the Conference on Disarmament in negotiating a Comprehensive Test Ban Treaty, and after considerable internal deliberation the United States has adopted "zero-yield" as its objective for this ban. The US recently also signed the South Pacific Nuclear Weapons Free Zone, and African Nuclear Weapon Free Zone (Treaty of Pelindaba), and is likely to sign a nuclear weapon free zone treaty for Southeast Asia if small concerns about treaty language can be worked out.

As a part of its efforts to reduce incentives for nuclear proliferation, and as an indication of the more circumscribed role the US foresees for nuclear weapons in the future, the United States along with the other nuclear weapon states issued positive and negative security assurances at the UN last April. The negative assurance indicated that the United States would not use nuclear weapons against a non-nuclear member of the NPT, unless it engaged in war against the US in league with a nuclear weapon state. In recent statements, Secretary Perry seems to have revived the possibility of a US nuclear response to a chemical or biological weapon attack against the United States.<sup>6</sup>

While these several US actions designed to "lead" the process of arms control have been most noticed, other actions have been designed to underwrite the nuclear "hedge. In the absence of any clear, direct threats, United States nuclear forces need to provide only a general guarantee of US security against potentially hostile states, including aspiring nuclear weapon states that might have hostile intent toward the US, its allies, and its vital interests. They are being reduced to the minimum level judged to be needed to provide this assurance. But at the same time, the US has deliberately retained the ability to expand its nuclear forces in the event of the re-emergence of a major Eurasian nuclear threat. The first element of this hedge is the retention of a number of nuclear weapons that could be loaded back onto ballistic missiles and strategic bombers. At the same time, the Department of Energy is preserving the ability to assure the safety and effectiveness of remaining US nuclear weapons for the foreseeable future -- far beyond the normal lifetime of those weapons, and without nuclear testing. This requires being able to identify, evaluate, and rectify any age-related problems that occur over the years, and if necessary to re-manufacture weapons where other remedies are not possible. In sum, these leading and hedging actions are designed to allow the US to continue to rely on nuclear weapons for the more modest deterrent tasks that remain in the post-Cold War environment, while at the same time working to create conditions of greater security where nuclear weapons can fall more into the background.

### **The United States and Nuclear Weapons in Europe**

<sup>6</sup> "U.S. may use nuclear strike to chemicals", By Sid Bulman Jr., Washington, March 28 (UPI). Perry is quoted as testifying before Congress that "If a country would be foolish enough to use chemical weapons against the United States, our response would be devastating and overwhelming." "The whole range (of weapons) would be considered."

In the United States, perhaps more than in Europe, there was hope that the end of the Cold War and its divisions would lead to a fundamental European transformation, in which the United States could play a much reduced security role. Both Democrats and Republicans recognized that the United States could not simply cut itself adrift from Europe – there is little genuine “isolationist” sentiment in the United States – but the Americans welcomed the opportunity to reduce the cost of the US military presence in Europe, they were happy to think that the risks associated with NATO flexible response strategy would be moderated, and there was an expectation that Europe now would and should assume a greater share of the remaining security burden.

An important part of the changes accompanying the end of the Cold War was a dramatic reduction in the number of nuclear weapons in Europe. Already by 1990, in compliance with the INF Treaty and other reduction decisions, NATO nuclear forces had been reduced from a high of around 7,000 weapons to around 4,000. By 1991, in light of US and NATO decisions, the US announced its intention to make large reductions in US tactical nuclear weapons, eliminating all short range missiles and artillery warheads, and removing all nuclear weapons from surface ships and shore-based naval aircraft. NATO agreed and further decided that it would reduce by more than half its only remaining tactical nuclear weapons, the stockpile of nuclear bombs, reportedly to a level of “about 700.”<sup>7</sup>

NATO’s New Strategic Concept, approved in 1991, was designed to adapt NATO to the new, greatly improved security environment. But it noted that, while the “security challenges and risks which NATO faces are different in nature from what they were in the past”, still, “risks to Allied security that remain are multi-faceted in nature and multi-directional.” These risks included uncertainty about the future of Russia, instability and conflict in the countries of the former Soviet Union that could spill over into NATO, and concerns with the proliferation of weapons of mass destruction in countries on the periphery of NATO (e.g., in the Southern Mediterranean and Middle East). Accordingly, NATO decided that “the Alliance will maintain for the foreseeable future an appropriate mix of nuclear and conventional forces based in Europe and kept up to date where necessary, although at a reduced level.” It further noted that “nuclear weapons make a unique contribution in rendering the risks of any aggression incalculable and unacceptable. Thus they remain essential to preserve peace.”<sup>8</sup>

The critical question NATO had to grapple with regarding European-based nuclear weapons was why they were still needed at all. Three rationales have been suggested. In the absence of a specific and direct military threat such as faced NATO before 1990, the function of NATO is to preserve peace and prevent coercion. NATO nuclear weapons were still seen in a broad sense as contributing essentially to this objective. First, they provide a vital element of risk to any potential aggressor, the risk that European-based, and even strategic nuclear weapons could be brought into play as a result of an attack on NATO. Such a risk should continue to outweigh any possible gains that a hostile state might harbor. And these risks are of a different and more ominous character even than the promise of defeat by NATO conventional forces.

Secondly, nuclear weapons deployed in Europe continue to demonstrate the direct link between the fortunes of all the members of the alliance, nuclear and non-nuclear alike. Therefore NATO continued to insist on “widespread participation by European Allies . . . in nuclear roles, in peacetime basing of nuclear weapons on their territory . . . .”

---

<sup>7</sup> International Institute for Strategic Studies, *The Military Balance, 1992-1993*, p. 14.

<sup>8</sup> “The Alliance’s New Strategic Concept,” *NATO Review*, No. 6, December, 1991, pp. 25-32.

Considering the controversy over NATO nuclear weapons in the 1970s and 1980s, there has been comparatively little objection to the retention by NATO of this small nuclear force and reduced nuclear role. No doubt this is due in part to the remote risk that a conflict will arise in which these weapons would be used, as well as the lower profile generally of the nuclear issue. But it is also token of the fact that NATO's willingness to continue to carry nuclear burdens is symbolically important to the United States, and that the deterrent power of nuclear weapons is still a meaningful factor in the security calculations of European NATO members.

While focusing on the role of nuclear weapons in the Atlantic Alliance, it is important to remember that other aspects of the trans-Atlantic relationship have evolved as well. Most notably, there has been cautious movement in Europe toward the development of a European defense and security entity, and cautions NATO acceptance of a meaningful European Pillar as long as it is not seen as a substitute for NATO. The Alliance, with support from the US, approved the development of a European security entity at its Summit in January 1994. The Summit declaration expressed "full support to the development of a European Security and Defense Identity [ESDI] which might in time lead to a common defense compatible with that of the Atlantic Alliance." This would "strengthen the European pillar of the Alliance while reinforcing the transatlantic link and will enable European allies to take greater responsibility for their common security and defense." The Summit also approved the creation of "separate but not separable capabilities" for defense, including the creation of a Combined Joint Task Force (CJTF) that in principle could be employed by NATO, where there is Alliance wide agreement on a military mission, or independently by the Western European Union, should the US decline to become involved.<sup>9</sup> While there remain many issues to be worked out in the establishment of the ESDI and the CJTF, the United States has supported and favors these elements of a stronger, more cohesive European entity. And the American reluctance to become engaged on the ground in the Bosnia operation was at least in part motivated by the American desire for Europe to take the lead in addressing security problems that develop in its own back garden. And finally, the US has watched, apparently without disapproval, the measured steps that have been taken by the British and French to consider closer cooperation in nuclear forces, and the possible establishment of a more cohesive British-French contribution to European deterrence.

### **The Future of Nuclear Weapons in Europe**

There is little indication that the role of US nuclear weapons in Europe will change anytime soon. The United States remains committed to NATO and to providing nuclear weapons as part of the NATO security structure. Nor is there, for now, strong pressure from NATO's European members to remove those weapons. NATO nuclear weapons still are seen as important to NATO and to European security and stability. Moreover, a number of steps have been taken that make them less visible and controversial than in the past, for example, the remaining bombs are off alert and in secure storage, and there are no plans for future modernization of the nuclear force.

The process of NATO enlargement is not likely change the picture for nuclear weapons. The "Study on NATO Enlargement," issued by NATO in September, 1995, states that "New members will share the benefits and responsibilities from this [nuclear deterrence] in the same way as all other Allies in accordance with the Strategic Concept...New members will be expected to support the concept of deterrence and the essential role nuclear weapons play in the Alliance's strategy of war prevention as set forth in the Strategic Concept."

---

<sup>9</sup> find and add

Certainly the deployment of NATO nuclear forces in new NATO states would be extremely controversial. However, the Enlargement study goes on to indicate that actual deployment of nuclear forces on the territory of new Alliance members is neither automatic nor likely. "There is no *a priori* requirement for the stationing of nuclear weapons on the territory of new members. In light of both the current international environment and the potential threats facing the Alliance, NATO's current nuclear posture will, for the foreseeable future, continue to meet the requirements of an enlarged Alliance." The Russian Federation does indeed continue to adamantly oppose NATO enlargement, although their grounds for opposition have not normally focused on nuclear weapons concerns. For their part, the Russian government has made it very clear that they intend to continue to lean heavily on nuclear deterrence for their own security in the post-Cold War era.<sup>10</sup>

Important changes in the role of nuclear weapons in Europe beyond those that have already occurred are only likely over the course of many years, and in the context of favorable political and geo-political evolution in and surrounding Europe. First, there would need to be a convincingly permanent decline of the threat from weapons of mass destruction, especially nuclear weapons, to Europe. This is plausible in the case of Russia, where continued reform could indeed lead to the gradual integration of Russia into an effective European security structure where, in the future, European states could come to view residual Russian nuclear weapons with no more concern than, say, the French view the nuclear forces of the United States. But no one can yet be sure that the process of Russian reform will reach this happy conclusion. Next, there would need to be confidence that states on NATO's periphery will not develop and threaten to use weapons of mass destruction against NATO member states. Again, many useful steps have been taken toward effective non-proliferation, and toward the settlement of disputes and conflicts that have sprung up in the aftermath of the Cold War (including efforts of NATO). Such developments lend hope that this source of threat to European security can be effectively managed.

Another important aspect of creating a more favorable security environment is expanding the region of stability in Europe. Some activities, such as the Partnership for Peace that provides links between NATO and the states to the east have been universally welcome and beneficial in creating understanding and alleviating tensions and hostile perceptions. Expansion of the political and economic benefits of the European Union to the east also holds out the promise of greater European integration and prosperity. The question of how to accomplish NATO expansion without creating a heightened sense of insecurity in Russia, on the other hand, is still unresolved. Ultimately, the creation of an effective political and security structure is likely to be the prerequisite for further change in the status of nuclear weapons in Europe. With progress toward such an integrated and secure Europe, the need for a specifically-NATO nuclear force stationed in Europe could evaporate.

That is not to say that nuclear weapons would disappear from Europe. Because of its own security perceptions and needs, Russia is likely to wish to retain nuclear weapons irrespective of its relationship with NATO. Similarly, the British and French governments have firmly believed for a long time that their own nuclear forces provide them with an irreducible element of national security. And increasingly these countries seem to perceive their future associated with a more integrated Europe. Both countries could well decide to retain nuclear forces to underwrite their own security even in the most favorable

---

<sup>10</sup> See Russia's "New Military Doctrine", announced on November 3, 1993, by Defense Minister Pavel Grachev, see "Russian Military Asserts Itself in New Doctrine", *Wall Street Journal*, November 4, 1993, p. A 10., among other reports.



circumstances likely to evolve in Europe. Together, they could choose to move toward the provision of a coordinated nuclear deterrent associated with a more unified Europe.<sup>11</sup>

Developments in Europe give reason to hope (as well as cause for anxiety) that the international security situation relevant to Europe could improve to the point that NATO would no longer think it necessary to deploy nuclear weapons in Europe. Even if this were to happen, there is every reason to believe that nuclear weapons will remain a powerful influence in global affairs. First, it is increasingly difficult to believe, as many Americans have wanted to believe, that the political changes that would be needed to marginalize or eliminate nuclear weapons on a more global basis will come about. Some changes do continue that suggest growing international cooperation and wider agreement that nuclear weapons should not be viewed as legitimate instruments of international politics. The indefinite extension of the Non-Proliferation Treaty is one example, although just beneath the surface the extension conference was marked by serious disputes between the nuclear weapon states and some non-nuclear weapon states that will prove difficult to resolve in the coming years. Another hopeful sign is the mostly peaceful evolution of the New Independent States, following the dissolution of the Soviet Union, although here too much still is to be done before a satisfactory and enduring set of relationships can be established among those states, and between them and their neighbors. And the fact that NATO succeeded in establishing the International Force and has met with success in its Bosnia operations, combined with the progress being made under the Partnership for Peace, offers hope that further progress will be made toward a more integrated European security arrangement.

But the limitless possibilities for a new world order (in which, *inter alia*, nuclear weapons would be eliminated) that some in the United States believed was within reach at the beginning of the 1990s are increasingly being replaced by recognition of enduring obstacles that remain in the way of a permanent, universal peace, or indeed of any fundamental transformation of the relationships between states. And if international politics are to remain a balance between the interests and aspirations of individual sovereign states, then nuclear weapons, as a powerful tool for underwriting the interests of sovereign states, are unlikely to be abolished swiftly. The most promising course for dealing with the dangers stemming from nuclear weapons is likely to be the one we have been treading: reducing the size and enhancing the safety of the arsenals of the nuclear weapon states; the gradual establishment and expansion of regimes and norms of nuclear non-use; creation of security environments that make the acquisition of nuclear weapons unnecessary for individual states and regions; and the strengthening of organizations and institutions that can restrain leaders and states if they, nonetheless, choose the path of proliferation and confrontation.

---

<sup>11</sup> See for example, Nicholas K.J. Witney, "British Nuclear Policy After the Cold War" *Survival* vol. 36, no. 4, winter 1994-1995, pp. 96-112. He concludes (p. 109) that "to the extent that a more positive vision of the role and purpose of the UK deterrent in the post-Cold War world is required, the present government's instinct is clearly that it is most likely to be found in the concept of a distinctively European contribution to Western security." There has been less than enthusiastic response to this idea since it was most forcefully advanced by French Prime Minister Alain Juppe in September, 1995. See for example, Karl-Heinz Kamp, "European Nuclear Cooperation: Prospects and Problems," paper presented to the NATO NPO Symposium, March 3, 1996.

### **DISCLAIMER**

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.