Nuclear Notions in Europe: Prospects for Development of a Nuclear Common Foreign and Security Policy

Charles Krupnick
Associate Professor
US Air Force Academy
2354 Fairchild Drive
USAF Academy, CO 80840
719 333-3259
krupnickca.34edg@usafa.af.mil

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This paper takes stock of nuclear activities and attitudes in Europe to see where we are on the path to a nuclear Common Foreign and Security Policy (CFSP) for the European Union (EU). Along the way, I will address some obvious questions, asked rhetorically in late-1998 by Serge M. Rogov, director of the USA-Canada Institute in Moscow: “Will the integrated Europe try to rely upon a more autonomous nuclear posture? Will this posture be based on the nuclear forces of Great Britain and France, or will the idea of multinational nuclear forces be possibly revived? Does it mean that Germany in the future will receive access to the nuclear button in one form or another?”

Events such as the India and Pakistan nuclear tests suggests a more nuclear-inclined world and that European institutions, if not the European public, may be further along toward acceptance of a nuclear CFSP than one might initially think.

There is still a long way to go, however. As French officials note, there can be no “European nuclear doctrine” without “European vital interests” and these have not crystallized as yet — although there seems convergence in the wake of Maastricht and EMU. Virtually all of the contemporary rhetoric about CFSP and the European Security and Defense Identity (ESDI), whether in the context of the EU, the WEU, or NATO, concerns low intensity conflict. The Petersberg Declaration, approved in June 1992, allows the WEU and other European entities to take on a variety of conventional operations, including “humanitarian tasks of combat forces in crisis management, including peacemaking.” The joint Anglo-French initiative at St. Malo in December 1998 and recent statements by European Commission President-elect Prodi statements make a European army more likely, but both neglect mentioning nuclear weapons.

Whole anthologies on contemporary European foreign and security policy developments are written without a single comment on nuclear forces.

One reason for the silence, of course, is that nuclear issues are particularly sensitive in Europe -- whispered in corners instead of shouted across rooms. Any positive incentives for Europe to develop a nuclear force will compete with powerful counter-currents. The norms of non-proliferation and disarmament are stronger in Europe than the United States; it is similarly increasingly difficult to operate commercial nuclear power plants in Europe and to dispose of their radioactive waste because of the influence exercised by environmental political parties and anti-nuclear advocacy groups and the sometimes unfavorable trend of public opinion. The domestic political landscape, even in nuclear-friendly France, is unlikely to produce a ready-made constituency in favor of a nuclear CFSP. The structural incentives remain, however, and the prospects for developing a nuclear capability explicitly associated with the EU seems more likely today than even one year ago.

Interest and Evidence

My interest in “nuclear notions in Europe” was stimulated by research I completed recently on the problems associated with decommissioned Russian submarines. The Soviet Union built about 250 nuclear submarines during the Cold War, many of them with two nuclear reactors, but the Russian successor state of the post-Cold War period does not require a large underwater fleet nor does it have the money to operate and maintain one properly. Consequently, one hundred or so Russian submarines are currently tied up to available pier space along the Russian Arctic and Pacific coasts, with
minimum manning and maintenance; many have their nuclear reactors still installed, with both ship and reactor integrity subject to a slow and potentially hazardous decline. Spent nuclear fuel contains dangerously radioactive material that could be released to the environment under the wrong circumstances. The nuclear fuel already removed from decommissioned Russian submarines is stored in inadequate facilities along several sea coasts under conditions considerably more dangerous than just leaving it onboard the submarines. The Bellona Foundation, a Norwegian environmental group, calls the whole situation a “Chernobyl in slow motion.”

The plight of old Russian submarines has spawned an international cooperative effort to help remediate the problem. Millions of dollars have been committed from individual countries and multinational organizations, although hundreds of millions are really needed to move forward with reactor defueling and submarine dismantlement in a major way. The effort is nonetheless a modest success story among the environmental and technical collaboration efforts made with the former-Soviet bloc. Led by Norway, the Nordic countries, the United States, and the European Commission are all playing positive roles in trying to alleviate the problems.

The active participation of this last entity sparked my interest in Europe’s nuclear future. The supranational civilian bureaucracy of the European Commission has previously refrained from engagement in activities related to defense issues, but is nonetheless a significant partner in this military problem: the disposal of old Russian submarines and their nuclear fuel. France and the United Kingdom, those guardians of national sovereignty within the EU, have raised a whisper to this activity -- indeed, the large nuclear production and service corporations of both countries have been among the most active bidders for participation in nuclear remedial efforts in Russia, making the moneymarked European Commission an important patron.

At one level, there is nothing surprising about this. The European Commission, through its own and associated environmental and developmental out-reach programs, such as PHARE, TACIS, EBRD, NEFCO, and the Group of 24, has been heavily engaged in a variety of nuclear activities with Central and Eastern Europe and the former-Soviet Union since the end of the Cold War. The Chernobyl accident of 1986 served notice to Western Europe that nuclear disasters were waiting to happen in the old Soviet bloc which could directly affect Western populations. Adopting a “better to preempt than react” philosophy, hundreds of millions of ECUs and Euros have been allocated for projects to improve civilian reactor safety and radioactive waste (Radwaste) management in Central and Eastern Europe. Much good has been accomplished, despite the damning report of the EU Court of Auditors in late-1998, and more should be done. The submarine spent fuel problem is a reactor safety and Radwaste issue that can largely be dealt with through mechanisms already in place. Much of the Commission involvement with Russian submarines is in fact directed by DG-XI, the Environmental Directorate; others, however, are controlled by DG-IA, the External Relations directorate which handles contacts with the New Independent States of Eastern Europe and also the Common Foreign and Security Policy (CFSP). To those accustomed to hypersensitivity over Commission participation in any activity hinting of security or defense -- much less a nuclear military project -- the development is a surprising one.
Motivation

Europe would presumably want a collective nuclear force if its interests diverged substantially from those of the United States or if the European leadership and public lost faith in the commitment of the United States to come to their defense. This is not a new concern and has been one of the recurring crises in the Alliance’s 50 year history. The Article V defense guarantee of the Washington Treaty is still sound and the dangers to Europe from nuclear or other attack now muted, but shocks can change conditions and perceptions in a hurry -- as debate over the NATO air campaign in Yugoslavia hints at from time to time. Even before the Kosovo conflict, the Alliance was under stress to keep its consensus intact. Stephen Walt recently wrote that NATO’s three unifying forces have either greatly diminished or vanished: first, the Soviet threat; second, America’s stake in Europe’s economy; and third, the existence of a generation of European and American elites whose personal backgrounds and life experiences left them strongly committed to the idea of an Atlantic community. His typology is simplified and subject to debate, but few would argue that the incentives for NATO solidarity are less than they were during the Cold War. In other words, the Alliance is now a preference, not a requirement. According to The National Interest editor Owen Harries, “the West” was a construct born of danger and fear and unlikely to survive more “placid periods.”

Shifts in the strategic landscape could also predicate Europe as a whole going nuclear. In May 1998, India and Pakistan tested nuclear weapons; in April 1999, both countries tested rockets with nuclear delivery capability and enough range to threaten the capital cities of their regional rivals. The declared nuclear club rose from five to seven almost overnight and shifted the strategic balance a notch or two. If we take systemic theories of international relations at all seriously, the major powers of the world should be reacting to this change in relative power distribution. The United States and Russia still retain a preponderance of nuclear forces and need not take any action, except perhaps to reconsider the commitment to further deep reductions in their nuclear arsenals to ensure that their security is not unduly threatened. The intermediate nuclear powers (China, France, the United Kingdom, and perhaps Israel), however, need to reexamine closely their place in the world. China no doubt already has and is moving toward qualitative improvement in both nuclear weapons and delivery systems, apparently with help from spies working in the United States. France and the United Kingdom may also be conducting nuclear strategy reviews, although not much information is available about them if they are. What reassessment is Europe as a whole conducting in view of the India/Pakistan tests, a Europe with many times the GDP and world influence of all South Asia combined?

Europe could of course opt for its own nuclear force even without a significant decline in its relationship with the United States or without further shifts in the strategic landscape. Political weight and prestige count in the world, which were certainly among the reasons India decided to enter the declared nuclear club. In 1993, an Indian Bharatiya Janata Party (BJP) spokesman said that: “Nuclear weapons will give us prestige, power, standing. An Indian will talk straight and walk straight when we have the bomb.” The development of a European political community, with a distinct political identity, shared cultural characteristics, and increasing acceptance of its own legitimacy, could provide a similar motivation. With the adoption of the common currency and other deepening
programs likely, the acceptance of Europe as something real and not imagined is growing. Europeans may soon tire of indignities, such as former Belgian foreign minister Mark Eyskens comment that: "Europe is an economic giant, a political dwarf and a military worm." Is the EU civilian superpower thinking more seriously about a nuclear dimension? Hyper-realism aside, there seem ample incentives today for Europe to look more closely at its place in a changing nuclear world.

**United Kingdom**

Europe already has a nuclear deterrent force of a kind because both the United Kingdom and France have declared that their national nuclear arsenals help deter threats against all the countries of NATO and Europe. The declarations are categorical and may not be taken too seriously by other European countries because of the relatively small size of the nuclear inventories involved and the historic nationalism of the two countries. Nonetheless, the British and French nuclear forces contributed to allied security during the Cold War and continue to provide muscle and perhaps needed ambiguity to Western deterrent efforts.

The United Kingdom was actually the first country to have a nuclear bomb project. During the early days of World War II, British scientists and officials came up with the positive results to atomic weapon feasibility studies associated with the Maud Committee. With its research eventually absorbed into the US Manhattan Project, the United Kingdom after World War II had to endure a period of nuclear technology exclusion predicated by the McMahon Act -- passed by the US Congress in 1946. Since nuclear weapons seemed to be the country’s only possible claim to continued great power status, in 1947 the British government decided to develop nuclear weapons on its own. This led to the first British nuclear explosion in 1954, conducted in Australia. The country soon developed thermonuclear devices and went through several weapon system development programs, including the V-bombers (Valiant, Vulcan, Victor), the contentious Blue Streak ICBM and US Skybolt air-launched ballistic missile, plus various dual-use aircraft, before settling on a reliable submarine-based ballistic missile deterrent system. With the restoration of US technical cooperation, the United Kingdom deployed four Resolution class nuclear powered ballistic missile submarines (SSBNs) armed with American Polaris missiles carrying British nuclear warheads. A fleet of four new-design Vanguard class SSBNs, armed with powerful US-built Trident D-5 missiles is being readied to replace the earlier class, although not without substantial controversy. Britain retains some air-launched nuclear capability through dual-use Tornado aircraft, with perhaps 200 or so warheads available at any one time out of an inventory over 400.

Britain’s nuclear policy and strategy began with independent intentions, but soon turned into a cooperative security arrangement. By the mid-1960s, Britain’s nuclear arsenal was firmly committed to NATO, except for situations of “supreme national interest,” and hence helped to provide the nuclear umbrella for the NATO membership, including those that were also members of the EU. Prior to the 1995 EU enlargement, this effectively meant all EU countries because it was hard to imagine an attack on Ireland that did not affect the United Kingdom’s vital interests; the admission of Austria, Finland, and Sweden to the EU with the latest round of expansion has altered the strategic congruency significantly. Suggestions of a specifically European mission for the British
nuclear arsenal are heard from time to time, as in 1966 when Prime Minister Edward Heath looked to "defence arrangements on a European scale, including Germany, with an Anglo-French arrangement in the nuclear field." However, the insular policy of the United Kingdom has been unenthusiastic about EU defense commitments: 60% believe commitments should be primarily national while only 7% believe the EU should take the lead. National leadership will need to work hard to change British attitudes in this regard, something the Blair government seems already to have begun to do. On the other hand, as columnist Dominique Moisi points out, "Europeans have been disillusioned so often in the past that it would be imprudent to celebrate these positive transformations [positive British EU initiatives] too soon."

France

General Charles de Gaulle became interested in nuclear weapons during World War II. By the mid-1950s, the French Fourth Republic had plans and projects in train to produce plutonium production reactors and reprocessing facilities; in 1954, Premier Pierre Mendès-France made the decision to move toward the development of nuclear weapons, affirmed in 1956 by Guy Mollet. The first French test was conducted on 13 February 1960 in Algeria with now Fifth Republic President de Gaulle in charge as commander in chief of the armed forces; the French presidency has kept a tight reign on the country's nuclear arsenal ever since. The system soon had thermonuclear weapons to be delivered by Mirage IV bombers, then 18 land-based intermediate range missiles based at Plateau d'Albion, and finally a fleet of five SSBNs from the Redoutable class and one of the transition L'Inflexible class. In combination, these forces were a miniature reflection of the "strategic triad" of nuclear systems maintained by the two superpowers. The land-based missiles were, however, phased out in 1996-97 and French leaders have decided not to deploy their Pluton and Hades tactical nuclear missile systems. While air delivery capability from the Mirage 2000N and the new Rafale will continue for the foreseeable future, the bulk of the nuclear deterrence will rest with four Triomphant class SSBNs just coming on line, to be equipped eventually with MIRVed (multiple independently targeted reentry vehicles) M5 missiles. Like the United Kingdom, this should keep at least 200 nuclear warheads available at all times out of an inventory of 400 to 500. Also like the United Kingdom, France has several capable nuclear attack submarines (SSNs) and in early-1999 put to sea the nuclear powered aircraft carrier Charles de Gaulle, after 13 years of troubled design and construction effort.

France's nuclear weapons and the policy supporting them have been premiere symbols of the country's independence, self-sufficiency, and particularism. Words like dissuasion, nuclear warning shot, and tous azimuts have added to an aggressive singularity associated with French nuclear doctrine. On the other hand, ambiguity has never been completely absent. While some believe that the Article 5 commitment to the revised Brussels Treaty (discussed below) implies a French nuclear defense guarantee to the members of the Western European Union (WEU), no government official has publicly backed up such a guarantee. President Chirac, however, has spoken of nuclear use if the "vital security interests of Europe were threatened." In the late-1990s France again raised the issue of a European nuclear force, but perhaps only to divert attention from its highly controversial nuclear testing program in the Pacific. France also uses pan-
European proposals as an incentive for other countries in Europe to lessen their security dependence on NATO and the United States.

**Anglo-French Nuclear and Defense Cooperation**

For most of the post-World War II period, the defense policies of the United Kingdom and France have been oceans apart, not just the separation of the thirty mile English Channel. The United Kingdom was the foremost advocate of NATO’s Atlantic defense dimension (often more enthusiastic than even the United States) while France pursued Gaullist independence and occasional forays toward European defense cooperation. A significant break-point occurred in the early-1980s with the allied INF and SDI controversies when many Europeans came to believe that the United States was putting its own interests well above theirs. This helped to move both the United Kingdom and France toward greater cooperation in a European context. The rebirth of the WEU in 1984 was the most apparent result, but Anglo-French military cooperation increased as well. In 1988 the defense ministers of the United Kingdom and France took several initiatives, including:

- French SSBNs will be able to call at British ports;
- France will open its lines of communication, including ports, airports, and railways, to British troops being deployed to Germany in the event of NATO mobilization;
- British troops will be able to exercise in France, something not allowed since France’s withdrawal from NATO’s integrated military structure in 1966.23

In late-1992 a Franco-British Joint Commission on Nuclear Policy and Doctrine was established. Senior officials from the foreign and defense ministries of the two countries meet routinely to discuss nuclear policy issues and to report their findings and conclusions to higher authorities. In 1993, the Joint Commission announced that the British and French nuclear doctrines had no significant points of disagreement. The Commission is now believed to have agreed on the French “nuclear warning shot” approach to strategic deterrence, to be fired by France or Britain against an advancing aggressor when “either” country’s vital interests are threatened.24 Because Joint Commission meetings are secret, this is still speculation however. There have also been exchange visits between nuclear scientists and defense officials of the two countries, with technical collaboration reportedly taking place on nuclear weapons design, development and stockpile maintenance, computer simulation, and peer review of data.25 Joint missile development was to be a part of this cooperation, but crumbled in 1993 when the United Kingdom canceled its participation in the Tactical Air-to-Surface Missile (TASM) program — a proposed stand-off weapon with several hundred kilometers of range.

The downsizing and upgrading of strategic forces by both nations after the end of the Cold War created a problem with keeping sufficient submarine missile assets at sea for effective deterrence. The Vanguard and Triomphant submarines will be modern and equipped with powerful nuclear weapons, but with only four ships in commission for each country a robust target coverage may be difficult — particularly since one ship will probably be in major overhaul at any given time. An untoward incident to another ship might make the deterrent mission difficult to achieve. Hence, cooperation between the
French and British nuclear forces to coordinate SSBN patrols and target coverage emerged as a possibility. The idea has apparently not gone very far because of each countries' continued desire to retain an independent deterrence.26 British nuclear weapons also remain committed to NATO targeting while France continues its independent force and runs its own targeting.

British and French officials took conventional defense cooperation unexpectedly forward at St. Malo and other meetings. While affirming their obligations under the Washington and Brussels treaties, they also noted that:

... the Union [EU] must be given appropriate structures and a capacity for analysis of situations, sources of intelligence, and a capability for relevant strategic planning, without unnecessary duplication, taking account of the existing assets of the WEU and the evolution of its relations with the EU. In this regard, the European Union will also need to have recourse to suitable military means ... 27

The British government went even further in March 1999 with proposals to build European defense structures and command procedures within NATO for use in European-only operations. The United Kingdom and France (and Germany) have reportedly agreed that EU defense ministers should hold regular meetings at EU headquarters in Brussels, a significant step towards creating a real defense dimension for the Union. These initiatives have not mentioned nuclear issues, but neither have they excluded them.

Germany and Nuclear Weapons

In its emerging years, West Germany was reluctant to give up the right of access to nuclear weapons. Chancellor Konrad Adenauer, abetted by defense minister Franz Josef Strauss, lurched from European Defense Community to Franco-German cooperation, and then to the beginnings of Multilateral Forces (MLF) discussion, seeking some control over the country's nuclear destiny. In the post-Adenauer era, German security policy moved away from flirtations with alternative arrangements and committed itself firmly to NATO cooperative security.28 Social Democratic Party (SPD) participation in government in the mid-1960s and Germany's accession to the Nonproliferation Treaty in 1968 fixed the country's nuclear direction for the next 30 years.29 In 1966, Chancellor Kurt Kiesinger stated unequivocally:

The Federal Republic has given an undertaking to its partners in the alliance to renounce the production of atomic weapons, and has in that respect submitted to international controls. We seek neither national control nor national ownership of atomic weapons.30

The tacit bargain seemed to be that German leaders would give up the idea of nuclear weapons in exchange for a real role in the nuclear affairs of the Alliance. Germany is an important member of NATO's Nuclear Planning Group and subordinate committees; it has access to nuclear weapons through a dual-key system whereby US devices are available for use on German delivery systems under NATO orders. During the Cold War, this may have amounted to over 1500 nuclear weapons.
Despite German acceptance of nuclear subordination, the INF crisis rekindled German concerns about its security from nuclear attack -- not to mention monstrous demonstrations by anti-war activists in the streets of major German cities. In the end, Germany acceded to deployment of *Pershing II* missiles on its soil and then had to accept their removal in the zero-zero agreement of the two superpowers in 1987. German leaders were notably reluctant to give up their *Pershing I* missiles. With the Cold War ending, structural theorists like John Mearsheimer advocated a controlled proliferation of nuclear weapons to Germany as a way to stabilize what promised to be an increasingly multipolar world.

In a 1996 article, Mark Gose discussed five nuclear futures for Germany: first, to continue its current nuclear and defense policy under NATO; second, to prepare for the end of NATO with discussions of policy options; third, to "Europeanize" its security structure through development of WEU or EU defense mechanisms; fourth, to pursue bilateral nuclear cooperation with the United States, France, or the United Kingdom; and, fifth to pursue a unilateral defense policy based on national nuclear weapons. The options reflect greater or less degrees of cooperation with the United States and with Germany's European allies. Germany's de jure assurances of nonproliferation remain valid and observed and there are few overt signs that Germany is prepared to depart from options one or two. In September 1990, Article 3.1 of the "Four plus Two" Treaty on German reunification reaffirmed Germany's pledge not to acquire nuclear weapons; the unlimited extension of the Nonproliferation Treaty in 1995 emphasized the same thing.

Germany has had a defense relationship with France outside of NATO since the 1963 Elysée Treaty where Adenauer and de Gaulle pledged cooperation on a wide range of issues, including defense. Joint military exercises began in 1986 with the next year witnessing the creation of the controversial Franco-German brigade, a bi-national unit that has served as a prototype for the numerous multinational military groupings that emerged after the end of the Cold War. This includes the *Eurocorps* of which Germany and France are the foundation. French leadership reportedly made an offer of "nuclear concertation" with Germany in 1995, but was politely refused; French President Jacques Chirac and German Chancellor Helmut Kohl signed an agreement on defense guidelines in December 1996, but the emphasis seemed to be on possible nuclear use and not control.

**German Greens in Power**

If anything, Germany seems even less likely to aspire to nuclear access than a year ago. An SPD-Green coalition took the reigns of power in Germany in September 1998; Joschka Fischer, Germany's new foreign minister and a member of the Green party, immediately proposed a rethink of NATO's nuclear strategy "to lower the alert status of [NATO's] nuclear weapons and for a renunciation of the first-use of nuclear weapons." The United States and other allies reacted negatively to Fischer's suggestion, noting that the ambiguity and flexibility of NATO's strategy enhances deterrence and helps to keep the peace. Defense Secretary Cohen said that first use "is an integral part of our strategic concept and we think it should remain exactly as it is." Germany's defense minister Rudolf Sharping later back-peddled to reassure US policy-makers, saying that the new German government believed nuclear forces played a fundamental role in
alliance strategy. At NATO’s 50th anniversary celebration in Washington, DC, German officials refrained from proposing any changes in NATO’s nuclear strategy — according to some sources, Germany (along with Canada) was “badgered” by the United States into not doing so.

Fischer went on to suggest that the EU may need its own military staff and policy institutions if it is to take decisions on military action without NATO resources. This would include things like:

- defense ministers to join EU foreign ministers at their regular meetings;
- a permanent body, comprising EU representatives with political and military expertise;
- an EU committee of military representatives;
- a military staff, with a capacity for analysis of situations, strategic planning and its own sources of intelligence; and,
- other resources, such as a satellite center and institute for security studies.

Conspicuously absent was mention of nuclear cooperation in a nuclear context, but the staffing, intelligence, and space assets proposals are mentioned by others as requirements for a European nuclear dimension.

Even more controversial than the Fischer foreign ministry have been the policies of Green minister of environment, Jürgen Trittin. He proposed a rapid shutdown of all German nuclear reactors used to generate electrical power and an end to the reprocessing of their spent nuclear fuel, following a trend in Europe begun by Sweden, Spain, and Italy. As an incentive to abandon nuclear reactors as a source of energy, he wanted to increase the compulsory insurance coverage for nuclear reactors ten-fold and to shift the burden of proof so that there were no health risks to plant operators. He also proposed taxing any financial reserves the operating corporations might set aside to cover the cost of decommissioning. In October 1998, the SPD/Green coalition adopted a one-year deadline to produce a plan and timetable for the shutdown of Germany’s 19 nuclear power stations.

This was a potentially mortal attack on the German nuclear industry and its interlocking partners; it was also too rapid a transition for the European business and political establishment to support. Counterattacks quickly began, including dire warnings about the financial costs and job losses that would result if Trittin’s plan were carried out; German reprocessing contracts with British and French companies were a particular concern, made for the long term and valued at between $1-2 billion. If contracts with the French company Cogema and British Nuclear Fuels (BNFL) were broken, the German government could be liable to enormous damages claims. The vigorous opposition rattled the government and led to a series of backtracking maneuvers and to visible fissures in the ruling coalition. Chancellor Gerhard Schröder was reportedly furious at Trittin for a decision to replace Germany’s nuclear safety commission with members more to his liking. Germany announced in January that it would delay its planned ban on reprocessing, leaving more time to reach agreement with reprocessing partners on how to handle existing contracts. Schröder also promised nuclear industry and union leaders
that he would not force the closure of any nuclear power plants during the current legislative term, which runs through 2002, despite Green Party desires to the contrary.43

**A Sometime Thing**

Nuclear issues have often been part of European cooperation and integration schemes. In the 1950s, they were enormously important to debates as NATO and the European Communities were first developing. NATO settled quickly into a situation where Europe contribute the bases and the United States provided the planes and nuclear weapons — more an American nuclear protectorate than alliance. The European Defense Community (EDC) proposal, ultimately rejected in 1954, had a nuclear component imbedded beneath the controversy over a European army. Nuclear research in Europe was placed under the *Conseil Européen pour la Recherche Nucléaire* (CERN) at about the same time and the European Atomic Energy Agency (EURATOM) established by a Treaty of Rome in 1957. In the same year, the Soviet *Sputnik* artificial satellite made everyone nervous by revealing the gaps in allied strategy and in dramatizing the need for a secure nuclear deterrent force to protect Europe.44 NATO’s evolving strategy, with American ICBM, bombers, and battlefield nuclear weapons to compensate for allied conventional inferiority, eventually filled the bill.45

Other ideas continued to be vetted. The French-inspired Foucher Plan and accompanying debates of the early-1960s were rife with nuclear proposals and counter-proposals. The United States countered with the MLF, stationing *Polaris* missiles aboard converted merchant ships with multinational NATO crews, to give Europe its own nuclear weapons — with a US veto of course. Diplomats on both sides of the Atlantic struggled to come up with solutions to nuclear control and responsibility issues to help balance the Atlantic relationship, to provide an outlet for Gaullist independence, and to find an inlet for the United Kingdom to Europe. In the end MLF was allowed to expire, the United States kept nuclear control of its NATO-committed weapons, the United Kingdom received US *Polaris* missiles for its submarines, and France prepared to leave the Alliance — observing that NATO would remain under US predominance for the foreseeable future.46

The 1970s were the years of *Eurosclerosis* and saw only occasional discussion of European or even bilateral nuclear cooperation in a European context. In the very late-1970s and on into the 1980s, debates over INF and SDI raised nuclear concern to a fever pitch. European nuclear proposals included one for “European defence through the French deterrent force” and for a European council to discuss “problems of strategy and the use” of nuclear weapons.47 Nuclear issues were part of the climate of opinion leading to the WEU platform on European security interests adopted in 1987. Paragraph 2 of the declaration stated that:

> We recall our commitment to build a European Union in accordance with the single European act, which we all signed as members of the European Community. We are convinced that the construction of an integrated Europe will remain incomplete as long as it does not include security and defence.48
Into the 1990s, the CFSP portion of the Maastricht Treaty was sufficiently broad to include a nuclear dimension, but did not address the issue explicitly. It called for joint action in armaments production, export controls, non-proliferation, and arms control (among other issues) to go along with the oft-quoted "all questions related to the security of the European Union, including the eventual framing of a common defense policy, which might in time lead to a common defense." More recently, relatively little public discussion of a nuclear dimension for the Common Foreign and Security Policy has been noted, although the issue is occasionally raised. European Commission President Jacques Delors in 1992 noted that if "one day, the European Community has a very strong political union, why then not a transfer of the nuclear weapon to this political authority?" The 1995 Amsterdam Treaty reemphasized the points made by Maastricht, and particularly emphasized the role of the WEU.

WEU

A viable argument can be made that Europe (the 10 WEU members of the 15 country EU anyway) already has a collective nuclear defense. Article V of the Brussels Treaty states:

If any of the High Contracting Parties should be the object of an armed attack in Europe, the other High Contracting Parties will, in accordance with the provisions of Article 51 of the Charter of the United Nations, afford the Party so attacked all the military and other aid and assistance in their power.

No mention is made of only "all the non-nuclear military and other aid and assistance in their power," hence a straight reading of the 51 year old treaty is that the United Kingdom and France should use nuclear weapons to defend their WEU brethren. Of course the WEU passed the torch of defense to NATO with its 1954 revision, so there really has been no way to implement the treaty effectively through the organization itself.

The revitalization of the WEU in 1984 was in part a nuclear issue. The apparent willingness of the United States to get rid of intermediate range missiles (INF) and to decouple itself from Europe for the sake of better US-Soviet relations was disconcerting to many in Europe. The further institutionalization of the WEU in the 1990s offered the possibility of real defense options for the future. A WEU Assembly declaration in February 1996 commented on what the organization needed to become operational:

"To achieve this objective, WEU must maintain structures that allow the governments of the member countries to take and implement their decisions unaffected by any opposition from countries regardless of whether they are neutral, or are observers or associate members of the organization, and must also extend its activities with a view to obtaining an increasing degree of convergence in the defense policies of its member countries. To that end, it will have to resume and broaden work that will lead to the adoption of a white paper setting out those countries' security and defense interests, the means at their disposal to guarantee them, the strategies they intend to implement, including deterrence..."
and the role of nuclear weapons, and the efforts they are prepared to make as regards armaments and the use of space."51

A follow-on report by Mr. De Decker of the Assembly Defense Committee on "The Role and Future of Nuclear Weapons" noted that it would be "... totally illogical to start implementation of the [Common Foreign and Security Policy] CFSP without examining the role of French and British nuclear weapons in the definition of a common defense policy of the EU."52 The WEU Assembly is a frequently used forum where ideas beyond the pale of current politically correct opinion can be vetted; it is, however, twice removed from real power.

**NATO Nuclear Planning Group and New Nuclear Strategy**

One of the main reasons that ideas for German or autonomous European nuclear forces did not make much progress was the success of NATO at bringing the allies into the policy formation process. The Nuclear Planning Group (NPG) began meeting in 1967 and is made up of all NATO members except France, with Iceland participating as an observer. Here the non-nuclear countries of NATO meet and share their wants and fears about nuclear issues at the ministerial level, with permanent staff and subcommittees providing bureaucratic support. Any decision concerning the use of nuclear weapons by NATO would involve as much consultation within the Alliance as possible, although the ultimate decision for use of nuclear weapons would remain with the political authorities of the countries owning the weapons.53

This process helped NATO through the stormy transition from massive retaliation to the flexible response strategy it retains even today. Although not a member of the NPG because of its withdrawal from the integrated command, France remained a part of the process because of the pressing requirement to avoid fratricide and duplication in nuclear targeting. After the end of the Cold War, France took part in drafting MC 400, the replacement for the Cold War era MC 14/3 strategic document.54 NATO's Rome summit in 1991 approved a new strategic concept noteworthy for its opening to the former Soviet bloc. The newest version of the Alliance's Strategic Concept, approved on 23-24 April 1999 during NATO's 50th anniversary celebrations, notes the existence of powerful nuclear forces outside the Alliance and the threat of nuclear proliferation. It also states that:

> The supreme guarantee of the security of the Allies is provided by the strategic forces of the Alliance, particularly those of the United States; the independent nuclear forces of the United Kingdom and France, which have a deterrent role of their own, contribute to the overall deterrence and security of the Allies.55

**A Very Nuclear Place**

Despite not having its own integrated nuclear force, the countries of Europe have been literally littered with nuclear weapons as a result of US deployments during the Cold War. Most of these weapons have been withdrawn with the agreements of the post-Cold War, but a number remain. In nuclear reactors, Europe is the most heavily densely developed place in the world: 132 of the world's 427 reactors are in the EU; 35% of all
electricity in the EU is from nuclear energy; the region has complete nuclear fuel cycles, from mining to use and then to reprocessing for plutonium.\textsuperscript{56} In short, Europe is a very nuclear place and is likely to remain so for a long time to come.

Within the Treaties of Rome are substantial nuclear understandings. EURATOM was approved with much ballyhoo in 1957, viewed by some as a smoke screen for the more important economic aspects of the Treaties. Article 2 of the Treaty authorized EURATOM to:

- Develop research and ensure the dissemination of nuclear technical information
- Establish uniform nuclear safety standards.
- Facilitate capital investment in the basic infrastructure needed for the development of nuclear energy.
- Ensure regular an equitable supplies of nuclear fuel.
- Make certain that nuclear material are not diverted to purposes other that those for which they are intended (i.e., establish safeguards).
- Exercise the right of ownership of nuclear material.
- Create a common market in specialized fissile materials.\textsuperscript{57}

The organization helped to facilitate the import of US civilian nuclear technology for civilian power plants, to the extent that by the 1970s Europe was on its own. EURATOM has also funded EU nuclear research, in particular the Joint Research Center with laboratories at Ispra (Italy), Karlsruhe (Germany), Geel (Belgium), and Petten (Netherlands). In 1984, EURATOM began controlled nuclear fusion research (JET) at its research institute at Culham, near Oxford. Within the EU nuclear complex, however, there is no provision for research with military application.\textsuperscript{58} EURATOM, for example, is much like a combination of the US Department of Energy and the International Atomic Energy Agency (IAEA) -- with which it is closely tied.

Europe's nuclear engagement with the former Soviet bloc is extensive and requires further emphasis. Because of the clear and present danger perceived from many Soviet-designed civilian nuclear reactors still in operation, EU countries were quick to begin a program of financial and technical assistance once the political barriers of the Cold War were lifted. By 1992, a nuclear safety program under the G-24 [the Organization for Economic Cooperation and Development (OECD) countries, minus Turkey] was put in place to coordinate aid to Central and Eastern Europe and the former-Soviet Union -- called G-24 NUSAC. NUSAC has a small secretariat, hosted by DG-XI of the European Commission, that tracks projects and prepares reports to inform the members and the public of its activities. As of October 1998, approximately $1.8 billion had been allocated by G-24 countries to Russia and other countries of the former Warsaw Pact for NUSAC related safety projects. By accepting NUSAC grants, the aid recipients agreed to maintain Western safety and environmental guidelines to improve their reactor operation.

Some of NUSAC funding has been coordinated through the Nuclear Safety Account (NSA) of the European Bank for Reconstruction and Development (EBRD). The EBRD was established in 1991 to help Central and Eastern Europe and the former-Soviet Union make the transition to societies based on "democracy, pluralism and a
market economy.” The European Commission-run PHARE program was begun in 1989/90 to assist Central and Eastern Europe through the systemic changes taking place in their countries. It has a substantial nuclear assistance component. TACIS [Technical Assistance to the Commonwealth of Independent States] provides assistance to most of the former-Soviet Union and addresses nuclear issues as well. The initiatives are designed primarily to support and speed-up domestic safety enhancement programs.

DG XI seems to have considerable discretion in dispersing its funds on issues like assistance for dismantling and defueling Russian submarines, and is highly courted by European companies involved in radioactive waste issues. As a symbol of EU involvement, on 15 May 1998 at the EU-Russia summit in Birmingham, England, European Commission President Jacques Santer, European Union Council President and British Prime Minister Tony Blair, and Russian President Boris Yeltsin agreed to strengthen environmental measures related to spent nuclear fuel.

Controversy over EU aid to the former Soviet bloc erupted in November 1998 after a report by the EU Court of Auditors charged that EU programs to improve reactor safety were “wasteful, plagued with muddled strategy and staff shortages, and ineffective.” The report noted that only half of the funds earmarked for reactor safety projects had been spent thus far and that some of those funds were likely wasted on “excessive profits” for Western consultants. According to Bernhard Friedmann, the president of the Court of Auditors: “It is particularly worrying that at the end of 1997, it was not possible to judge whether there had been any actual progress in terms of nuclear safety.”

European Commission spokesman Hans van den Broek defended Europe’s record, noting that its strategy had been clear and transparent and was proceeding in logical stages. He spoke of improvements in Eastern nuclear regulatory agencies made through transfer of methodology and applications and of the number of safety assessments and studies. On the other hand, Van den Broek acknowledged that measuring the effectiveness of technical assistance and any improvement in nuclear safety culture was difficult to do.

A Less Nuclear World

Despite the appearance of India and Pakistan as declared nuclear powers, the world is becoming less nuclear in absolute terms. At least two thousand warheads a year are begin stored or destroyed as a result of START I and other arms control agreements between the United States and Russia. The global stockpile has been reduced from a high of 70,000 to 36,000 nuclear weapons today. For the nuclear superpowers the issue is not how to make more and better nuclear weapons, but how to dismantle what they have safely and with adequate accountability. The United Kingdom and France have moved more modestly in the direction of arms reduction.

The nuclear nonproliferation regime has been institutionally strengthened over the last several years. The Nonproliferation Treaty (NPT) review in 1995 resulted in an indefinite extension of the agreement vs. the 25 years of the original document. With Brazil’s accession in 1998, only three countries of significance --- India, Pakistan, and Israel -- remain outside the treaty. Other portions of the nonproliferation regime, such as the Nuclear Supplier Group agreements and the Missile Technology Control Regime, are being strengthened. The Comprehensive Test Ban treaty has gained acceptance as well.
and the IAEA has received added powers to investigate alleged or suspicious incidents that may lead to nuclear proliferation. The US Cooperative Threat Reduction (CTR) program and Europe's nuclear safety initiatives are helping to stabilize a still hazardous situation in the former-Soviet Union. Nuclear free zones are emerging and being strengthening, such as the Treaty of Tlatelolco in Latin America, Rarotonga in the South Pacific, and Pelindaba in Africa. Progress is even being made in Central Asia with the Almaty Declaration and a proposal made in 1995 by Belarus called for a nuclear-free Central and Eastern Europe, including Poland, Czech Republic, the Slovak Republic, Hungary, the Baltic States, Ukraine, Belarus, and possibly Moldova.65

Within many states, not just Germany, the growth of nonproliferation norms has caused a sense of de-legitimization in the use and possession of nuclear weapons. France's resumption of nuclear testing in 1995 caused a firestorm of criticism, rationalization, and threatened adjudication. Greenpeace want the European Parliament and Commission to review the action, under threat of bringing the matter before the European Court of Justice.66 In 1998, the European Parliament defeated a declaration that nuclear power could not be considered a safe and sustainable method of energy production, but only by 225 to 218.67 The Parliament has been one of the developing centers of concern about nuclear activities. At the same time, the "New Agenda Coalition" of several nuclear-concerned countries presented the United Nations with a detailed road map on how to achieve a nuclear-weapon-free world over a period of several years. Of the 16 NATO states, only the United States, Britain, France, and Turkey voted against the resolution while the rest abstained; of the states of the former Soviet Union, only Russia voted against it, Azerbaijan and Belarus voted for it, while the others abstained.68

In December 1996, 60 retired generals and admirals from 17 countries released a joint statement calling for deep cuts in existing nuclear arsenals and the eventual elimination of nuclear weapons. The group included notables such as John Galvin, former Supreme Commander Allied Forces Europe (SACEUR) and Charles Horner, US commander of allied air forces during the Gulf War. They called for an expansion of nuclear-free zones and for movement by the United States and Russia to reduce and move towards elimination of their nuclear arsenals.69 Recent public opinion polls in the United States and Britain suggest that more than 80% of the respondents favor the elimination of nuclear weapons. In Australia, Canada, Germany, and Norway, those in favor of abolition exceed 90%; in Japan, the percentage is 78%; in Russia, 61%. With the end of the Cold War and the Gulf War, nuclear weapons began to appear anachronistic and irrelevant to many states. Yet pollsters also note that, although the public was generally in favor of disarmament, it was without real commitment or enthusiasm -- leaving room for policy-makers to swing back to a more nuclear world.70

A More Nuclear World

Almost 50% of Americans also believe that the United States may be attacked by nuclear weapons by a foreign country or terrorist group sometime in the next 10 years.71 This fear is reflected in Europe, despite the general intolerance of nuclear issues. Europeans are quite aware of the deterrent potential, prestige, and symbolism attached to nuclear weapons and the danger of being without protection against them.
William Walker in a 1998 article in Foreign Affairs considered 1995 a breakpoint after which the world began again to become more "nuclear-minded." This was precipitated by several developments, including:

- Russia's failure to ratify START II and its difficulties in implementing transparency and irreversibility agreement with the United States.
- India's refusal to join the CTBT in August 1996 and thereby to allow it to enter into force.
- The inability to open negotiations in the Conference on Disarmament on a Fissile Material Cutoff Treaty (FMCT).
- The slow progress in implementing plutonium and highly enriched uranium disposition programs.
- The Indian and Pakistani nuclear tests in May 1998.\(^{72}\)

Walker traces much of the change to domestic politics. The accession to power of the Indian BJP in the late-1990s, with its advocacy of the "Hindu bomb," led directly to the Indian and Pakistani nuclear explosions. The right wing Israeli government of Benjamin Netanyahu -- caretakers of the undeclared Israeli nuclear arsenal -- was not helpful, nor was Russia's increased attachment to nuclear weapons. As its economy and conventional forces continue to wither, nuclear weapons are for Russia perhaps its sole claim to superpower status and even to an adequate defense. I would add the nationalism of the US Congress after 1994. The Republican leadership and membership have shown contempt for multilateral mechanism's, strongly advocate controversial missile defense systems, and generally pursue US self-interest to the hilt, making a leadership role in nuclear control activities tentative, half-hearted, and less credible. After 1995 (according to Walker), key countries attached renewed utility to nuclear weapons, partly due to a complacent attitude towards the non-proliferation regime after the NPT extension conference, and partly due to the unwillingness of the nuclear states to move forward with their own disarmament.\(^{73}\) The rest of the world became convinced that the nuclear states had no intention of giving up their nuclear weapons any time soon, despite the end of the Cold War.\(^{74}\)

In Europe, France and the United Kingdom showed no greater willingness to give up their nuclear weapons with the end of the Cold War than the superpowers. Without substantial conventional capabilities, they may even tend to rely on nuclear weapons even more than in the past -- just like Russia.\(^{75}\) According to Jasjit Singh, while Europe has stood firmly for non-proliferation of nuclear weapons during the past five decades, it has done "precious little" to press for nuclear disarmament after the end of the Cold War.\(^{76}\) Europe's reaction to the India/Pakistan nuclear tests was decidedly subdued, for example, rather like a "fellow traveler": France and Germany issued statement denouncing the tests but made it clear they would not impose full-scale sanctions, going so far as to prevent EU efforts to impose stronger penalties.\(^{77}\)

**Not Tomorrow, But Soon**

Europe is therefore caught between two trends. Structural changes to the world system seem to be encouraging the acquisition of nuclear weapons by political entities
with weight (like India) or those with exceptional security problems (like Pakistan, Israel, and perhaps North Korea and Taiwan). Europe's further integration and more complete sense of self could be a part of this trend. Opposed is a developing nuclear disarmament regime about which many Europeans are remain enthusiastic. This is reinforced by domestic political developments that have brought anti-nuclear parties and groups into positions of real influence for the first time.

Realism's rationality fails as a prescriptive tool in cases where there is significant value complexity, such as the various circumstances and reasons to keep or reject nuclear weapons. Beatrice Heuser makes a persuasive case that political culture will help shape the ultimate choice, offering that "nuclear mentalities" or national centers of gravity about nuclear issues have developed over the last half century. She postulates three contrasting pictures: a backward-looking, conservative and intellectually plodding Britain using nuclear weapons first to seek to defend its position and later to compensate for its losses, contrasted with a forward-looking and intellectually dynamic nuclear debate in France -- where nuclear weapons offered an escape from the patterns of the past rather than a means to continue them. For Germany, the holocaust potential of nuclear weapons proved inseparable from the holocaust experience of World War II and provokes nuclear notions with strongly religious overtones. These divergent attitudes will have to come together somehow for a nuclear CFSP to take shape.

It may be time for a serious public debate on Europe's nuclear future, just as debate is beginning on the substance and execution of NATO's policy in Yugoslavia and on US policy toward China. Alternative futures include:

- Continue the current European association with NATO and the United States, with a US superpower and two mid-sized and relatively independent nuclear powers. It has worked for over 30 years and should prove effective for the years ahead.
- Move Europe more strongly toward nuclear disarmament, acceding to pressure from a vigorous, well-informed, but not necessarily majority public opinion, in hopes of providing some kind of a "guiding light" for the world. It could work, and in the long term may be the earth's only hope; if Europe does not take the lead, certainly neither the United States nor any other nuclear power is likely do so.
- Move toward a nuclear CFSP, acceding to the demands of a more dangerous world, to Europe's increasing integration, and to the gradual loosening of Euro-Atlantic ties.

An EU CFSP with its own nuclear weapons under supranational control is unrealistic for any time soon, despite the Union's already substantial involvement with nuclear issues. It is very unlikely that the United Kingdom and France will give up their weapons to supranational control or that a multinational production enterprise, perhaps based on the German nuclear industry, would get into the nuclear weapons production business. Short of some terrible shock that turns opinion, public and special interest opposition to this path seems overwhelming. On the other hand, the creation of a nuclear CFSP along the lines of a NATO model is a fair possibility for the middle term, for several reasons:
• The structural case is compelling. It is a more nuclear world with the accession of India and Pakistan to the ranks of declared nuclear powers; other threats are possible and Europe’s security interests are converging. The case for disarmament is a gamble and may be possible for Europe only with continued US protection.

• A nuclear CFSP would be easy to do, political costs aside, and essentially a bureaucratic exercise. The hardware and methodology are probably already available in the British and French nuclear programs; experience at collective nuclear defense has been gained through the NATO NPG and related bodies. Precautions must be made so that the authority does not become too isolated and bureaucratic in its orientation, mimicking Western central bankers who change interest rates willy nilly upon threat or decline of inflation.

• It could be relatively cheap, an extra appeal to Europeans who resist defense spending. The United States is spending about 3.4% of GNP on defense; the remaining NATO allies an average of 2%. Greater reliance on nuclear weapons for deterrence might allow Europe to keep its defense expenditures low.

• Europe is a very nuclear place. For all the publicity given antinuclear movements, and perhaps the root cause of the protest movements, the EU and its membership are heavily engaged in a wide variety of nuclear activities. Taking on one more would not be too great a burden.

• US/Russia arms reductions have diminished the gross imbalance between superpower and intermediate power nuclear arsenals, although it is still substantial—at least 10 to one even after the implementation of START II agreements. Proposals of a 1000 warhead cap for START III would make a combined British-French arsenal roughly comparable in size to the nuclear superpowers were no compensating reductions made, making nuclear balancing more feasible.

• Protests tend to be trumped by interest. Some of the vanguard countries for disarmament, such as members of the New Agenda Coalition (Brazil, Egypt, Ireland, Mexico, New Zealand, Slovenia, South Africa, and Sweden), resemble reformed alcoholics. Brazil, Sweden, and South Africa all pursued nuclear weapons programs for part of their recent history and are now proselytizers of nuclear disarmament. Their decisions to refrain from developing nuclear weapons had much to do with self-interest, as did their decisions to try to develop them in the first place.

If a nuclear CFSP does develop, it will likely be for deterrence only—not for war fighting. It would be in a state a readiness to deter nuclear attacks by other nuclear powers, to have both nuclear and non-nuclear powers think twice about conventional attacks, and perhaps to provide a degree of extended deterrence against nuclear and non-nuclear attack for countries not members of the EU (or whatever European entity the nuclear force represents) but that are closely associated with the interests of Europe. It would feature nuclear weapons, delivery systems, and a method of command and control that would integrate European political leadership with a collective defense establishment. Command and control could be supranational or intergovernmental, with the later much more likely. Even after the recent St. Malo accords, French Defense Minister Alain Richard noted that European defense will remain “an inter-governmental matter, there won’t be any majority rule” within the Council of Ministers. This could
include some kind of enhanced troika with participation from the new CFSP “High Representative” and the two European nuclear powers. A nuclear CFSP would also have to solve the same dilemma faced by all nuclear release authorities: the system must guarantee that nuclear weapons are released only under absolute political control, while at the same time ensuring that they can be deployed quickly and reliably, even under attack, to ensure their deterrent value is credible.

Treaty minefields would require finessing: a nuclear CFSP a violation of the NPT; what access to nonproliferation regimes would the non-nuclear CFSP countries have; how will the cost be shared, i.e., should the United Kingdom and France be compensated for their previous research and current assets? Enarchs and officials from Whitehall will no doubt find a way to do it if the political will exists. More difficult may be issues of command and control. Exactly how will the political and military arrangements be made? Will Germany have a role in decisions to release nuclear weapons or only in decisions “not” to release them. How indeed will they be used? Not to trivialize a very important topic, but a good thing about nuclear weapons is that they will probably never have to be used to test the ambiguities and uncertainties of strategies and procedures – leaving “what if” to a mental or war game exercise.

4 See, for example, Foreign Policy of the European Union: From EPC to CFSP and Beyond, Elfriede Regelsberger, Philippe de Schoutethee de Tervarent, and Wolfgang Wessels, eds. (Boulder: Lynne Rienner, 1997).
5 Coming late to the topic, I have relied extensively on other publications and experts on European nuclear issues, most particularly Beatrice Heuser and her book NATO, Britain, France and the FRG: Nuclear Strategies and Forces of Europe, 1949-2000 and Bruce D. Larkin’s Nuclear Design: Great Britain, France, & China in the Global Governance of Nuclear Arms.
6 A phrase often used by Bellona representatives to describe the Radwaste problems of Northwest Russia. See, for example, The Guardian (London), 21 October 1998.
7 While the European countries have focused on civilian reactor safety issues, the United States, through its Cooperative Threat Reduction Program (CTR), has contributed more than a billion dollars to the proper storage and dismantlement of nuclear weapons. This arrangement seems to be one of those tacit bargains that happen all the time in international relations where allied countries focus on particular issues and avoid others to enhance whatever comparative advantage they may have.
8 Financial Times, 18 November 1998.
17 Larkin, Nuclear Designs, 36.
20 Financial Times, 16 November 1998.
21 Grosset, Western Alliance, 172.
22 Heuser, NATO, Britain, France, and the FRG, 119.
24 Heuser, 166.
26 Larkin, Nuclear Designs, 174, cited from the defense correspondent of The Independent.
27 Joint Declaration issued at the British-French summit, Saint-Malo, France, 3-4 December 1998.
28 Christoph Bluth, Britain, Germany, and Western Nuclear Strategy (Oxford: Clarendon Press, 1995), 179.
29 Heuser, 140.
30 Heuser, 140.
32 Heuser, 120
37 New Straits Times (Malaysia), 6 February 1999.
43 "National Journal's Daily Energy Briefing," 4 May 1999. Sweden made the decision to go non-nuclear with its power production several years ago, but has also been doing a bit of back tracking of its own as financial obligations and dependency become more evident.
44 Heuser, 25.
45 See Heuser, 126-137, for much more on these debates.
46 For much more discussion, see Grosset, The Western Alliance, 199-208.
47 Heuser, 167.
50 Heuser, 170.
54 Heuser, 165.
55 The Alliance’s Strategic Concept, paragraph 62.
56 F. Caccia Dominioni, DG XVII (Energy), Director of non-fossil Energy Industries and Markets, "The Role and Tasks of EURATOM in the Field of Peaceful uses of Nuclear Energy," based on an address given at the International Conference on Nuclear Safeguards, St. Petersburg, Russia, 10-11 April 1995.


“Center for the Promotion of Imports from Developing Countries” (the Netherlands) website, http://www.kommanet.nl/demo/ssgleb01.html.


Financial Times, 18 November 1998.


“EU Commission must act now on French tests or Face European court action,” http://www.greenpeace.org/-comms/rw/oct03.htm.


George Gallup, Jr., The Gallup Poll: Public Opinion 1997 (Wilmington, Delaware: Scholarly Resources, Inc., 1998), 256. 16% considered nuclear attack very likely; 30% somewhat likely.


Walker, “Relations after Indian and Pakistani explosions,” 506.

Larkin, ix.

Larkin, 309.


Jim Walsh, Los Angeles Times, 1 June 1998.


Gazette Telegraph (Colorado Springs), 3 April 99.

At the end of 1998, the United States had approximately 12,000 warheads, with 7500 deployed on 550 ICBMs, 408 SLBMs (submarine launched ballistic missiles), and 92 heavy bombers. Rogov, “Prospects for Nuclear Arms Control,” 8.


Heuser comes to similar conclusions on the ease of establishing an intergovernmental nuclear CFSP. Heuser, 171.