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FRANCE: NUKES STUCK BETWEEN NATO AND EU

by

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March 2013

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FRANCE: NUKES STUCK BETWEEN NATO AND EU

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ABSTRACT

In the year 2013, with NATO incorporating policy and strategic changes amid the new perceived threat since September 11, 2001, the government of France must again rethink and recalibrate its nuclear policy. At least since the end of World War II, France has wanted to play a decisive role within European politics, financial affairs, defense, and, specifically, it has signified that Paris would offer regional nuclear deterrence for Europe. On the one hand, such an enhancement of France's profile within European defense and deterrence would fulfill the Gaullist aspirations for France as a world power and for European defense autonomy. On the other hand, practical limits—economic, political, and strategic—may break French ambitions.

Thus, ultimately, this thesis argues that although France may aspire to take center stage in European nuclear defense, it is in no practical or political position to do so. And even if France could present a credible nuclear deterrent for the region on its own, further strategic and political considerations militate against France assuming a different role in European defense. Without question, there may be more for France to do in this regard, but only in connection with NATO and the United States.

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I. THE FRENCH: MAKING THEIR GAMMA CAKE AND EATING IT, TOO

In 1960, France became the fourth state to test a nuclear weapon, cementing the Fifth Republic's status as a major power. The Fifth Republic saw such weapons technology as the way to regain French superpower status at the height of the Cold War. In the 1950s, France embarked on a campaign of building for nuclear energy to power its postwar reconstruction and nuclear weapons to deter the USSR. Today, with NATO incorporating policy and strategic changes amid the new perceived threat since September 11, 2001, France must again rethink and recalibrate its nuclear policy.

France has wanted to play a larger role within European politics, financial affairs, defense, and, specifically, it has signified that Paris would offer regional nuclear deterrence for Europe. On the one hand, such an enhancement of France's profile within European defense and deterrence would fulfill the fondest Gaullist aspirations for France as a world power and for European defense autonomy. On the other hand, practical considerations—economic, political, and strategic—may break French ambitions. Thus, the first question is whether France can take over the preeminent position in Europe's nuclear deterrence. The broader issue, though, is whether France should.

A. FRANCE ALREADY PLAYS A CRITICAL ROLE, BUT FAILS TO REALIZE IT

The NATO/U.S. extended nuclear deterrence for Europe has been in question for decades and the recent U.S. strategic shift to the Pacific has once again put a strain on European security at a moment of tension and flux with the world economy. The question of European nuclear nations, specifically France, assuming a bigger role in European nuclear deterrence becomes important at a time when U.S. priorities and defense spending are focused elsewhere. France in the current context must work with NATO to maintain its own nuclear credibility, as well as presenting a united face for the organization, and to prove to the international community that the European nuclear deterrence is still strong. By itself, however, France does not pose a credible regional deterrent at present.

In today's nuclear arena, credible deterrence should be maintained for the inward and outward perception of strength and resolve. The other part that becomes critical to national security is political and diplomatic cohesion. Cohesion in the nuclear age becomes intricately important to national defense. With the recent news of French reintegration into NATO's military structure and the Force de Frappe being recognized as having a deterrent effect in Europe in the Strategic Concepts document, France must be careful when making statements that show diverge from the NATO "standard." The importance of alliance cohesion and deterrence are one and the same. If either the credible dissuasion or any inconsistencies within the standing alliances falter, the existing French system will only become further marginalized—to the detriment of France, Europe, and NATO.

The politics involved with nuclear deterrence calls attention to many unanswered questions involving self-reliance in Europe and keeping the promises between Europe and North America. Ever since the inception of the North Atlantic Treaty Organization in 1949, France has been skeptical of the practicality of a NATO led collective defense. With European defense through NATO tied to U.S. nuclear weapons, France was not convinced that Washington would actually use nuclear weapons in defense of Europe (and likely incurring the atomic wrath of the Soviets). Paris also became wary of the rearmament of Germany. The ever-present burden-shifting/sharing element within NATO exacerbated French unease. Burden-shifting, in the context of France and NATO, came down to a trade-off between the U.S. wanting to withdraw its troops from Europe and mobilize a larger portion of the European continental defense using European soldiers. France would be a large contributor to this European defensive posture due to its relative strength compared to other European nations.

With all of the political pieces in constant motion, the potential for unplanned consequences—a rapid deterioration of international relations or, at worst, nuclear war—is high. The appearance of differences within the Alliance may form an avenue that outside aggressors can use to drive a wedge into NATO and divide and conquer the

Alliance.¹ This dynamic is particularly important in this age of terrorism. Terrorism looks not to gain territory; it looks to increase political leverage and credibility for ideological reasons.² NATO in disarray, particularly over such fundamental issues as nuclear weapons, may offer exactly such leverage. Thus, France must remain diplomatically close to its allies to show terrorist organizations that if France is attacked, many other nations will come to its side to combat the threat—and vice-versa. In this context, the nuclear factor provides key information on the overall health of the alliance.

Additionally, any French steps toward a more prominent or more muscular nuclear role in Europe may disrupt the delicate process of ridding the world of nuclear weapons. The Non-Proliferation Treaty (NPT), to which France is a signatory, sets out to eliminate nuclear weapons all together.³ Proliferation and arms control are matters of at least as much urgency today as during the Cold War because of the increased threat of nuclear terrorism and authoritarian state actors pursuing nuclear weapons for aggressive purposes. As such, even the major world powers—especially the major world powers—have a real, existential interest in lessening nuclear or potentially nuclear tensions in the world and in generally de-nuclearizing the strategic and diplomatic discourse.

Thus, ultimately, this thesis argues that although France may aspire to take center stage in European nuclear defense, it is in no practical or political position to do so. And even if France could present a credible nuclear deterrent for the region on its own, further strategic and political considerations militate against France assuming a different role in European defense. Without question, there may be more for France to do in this regard, but only in connection with NATO and the United States.

¹ Wallace J. Thies, *Friendly Rivals: Bargaining and Burden-Shifting in NATO* (Armonk: M. E. Sharpe, 2003).

² Cornell University, *Annual Country Reports on Terrorism*, 2012, <http://www.law.cornell.edu/uscode/text/22/2656f>, accessed August 30, 2012.

³ United Nations, *Non-proliferation of Nuclear Weapons (NPT)*, Nuclear Treaty (New York: United Nations, 2010).

B. ROAD BLOCKS ON FRANCE'S WAY TO REGIONAL DETERRENCE

Nuclear weapons are no longer seen as strictly a military item; they are political objects, as well, and creating or maintaining a credible deterrence becomes critical in the security of a nation or region. The term in the arena of nuclear weapons concerns the ability of a nuclear state to successfully deter a belligerent from aggressive actions towards a nation. Credibility is built upon both the threat and actual use of, in this case, nuclear weapons. Yehoshafat Harkabi notes, "For the threat to be credible and convincing the threatener must actually be prepared to implement it in the event of aggression."⁴

Harkabi breaks "credible deterrence" down further into three broad categories: credibility, capability, and intention. There are several aspects of France's deterrence that, according to the Harkabi categories, can argue against France's credibility. One example is the ability to defend the populous against a nuclear attacks; another is a state's capability to ensure its weapons survive a surprise attack.⁵ While France has limited national capabilities to intercept incoming nuclear weapons with the Aster missile, France would need to build more offensive and defensive weapons to support a larger role on the continent.⁶ Such a program would place immense stress on France's already embattled economy, to say nothing of its relations with its European neighbors.

The principles of credible deterrence and positive control of national nuclear weapons were taken into consideration in the French Constitution. Articles 5 and 15 formed the basis of the control of nuclear weapons where the president was "[t]he guarantor of 'national independence' and 'territorial integrity;'"⁷ as commander-in-chief of the French armed forces, he has sole control over nuclear weapons. The policies guiding them allow the president to enact an aggressive deterrent strategy to inform

⁴ Yehoshafat Harkabi, *Nuclear War and Nuclear Peace* (Washington, D.C.: Library of Congress, 2008), pp 31.

⁵ Ibid.

⁶ Ibid.

⁷ Bruno Tertrais, "France," In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 103–132 (New York: Oxford University Press, 2010), 108.

foreign nations or independent actors that France will not hesitate to use nuclear weapons and inflict an unacceptable level of damage to such belligerents.⁸

This strong presidency is a hallmark of Gaullism, of course. The prevalence of Gaullism is as relevant today as it was in the 1950s and explains the particular cachet that nuclear weapons have in France as a means of gaining international political power. The basic tenets of Gaullism are nationalistic in nature. The individuals who subscribe to these views look for French independence and *grandeur*. Gaullists look for France to become (or remain) a major world power with a say in the international community and a state that does not become subservient to other nations. Certainly throughout the later 20th century, nuclear weapons went a long way toward securing France's status along Gaullist lines. At the same time, France does not shy away from, and in fact welcomes, other European nations moving underneath the French nuclear umbrella—with French fingers alone on the buttons.⁹ Indeed, throughout French nuclear history, prominent members of the government have emphasized the need for an independent France to play a bigger role in the nuclear arena for Europe. From President Charles de Gaulle, Prime Minister Jacques Chirac all the way to President Sarkozy and President Hollande, French leaders in the nuclear age have all made provocative statements that show France's willingness to fulfill this role.

And yet for the entirety of French nuclear history (starting with the first French detonation in 1965), no other European nation has joined in any talk of swapping out the regional nuclear deterrent for a strictly French presence. This reluctance to change the current nuclear agreements with the United States (through NATO) becomes even clearer through the European Security Strategy and the Common Security and Defense Policy initiative. The ESS and CSDP both describe longing for more unity, but cannot fully

⁸ IBID., Yehoshafat Harkabi, *Nuclear War and Nuclear Peace* (Washington, D.C.: Library of Congress, 2008).

⁹ Anthony Hartley, "Gaullism: The Rise and Fall of a Political Movement," *Outerbridge and Dienstfrey*, 1971: 329–331.

integrate the continent due to sovereignty issues and inexperience.¹⁰ European states have been reluctant to count on each other for defense, more specifically relying on other European nations to provide security for their own nation.¹¹

The current financial uncertainty throughout Europe has made defense spending and decision making progressively difficult for each European nation.¹² With finances being more closely scrutinized, the problems of modernizing and building a larger and immensely expensive weapon becomes a harder sell to the French public. Nonetheless, the policies of former French President Nicholas Sarkozy remain largely unaffected by the recent change in government, and France has pursued the upgrade and further development of the republic's *Force de Frappe* to maintain French status as a great power. As Charles de Gaulle began the process of greatness in the 1950s, there is little doubt that President Hollande will continue development and maintenance of nuclear weapons as his predecessors have done.¹³

C. WHAT OTHERS HAVE TO SAY ABOUT PARIS

The story of why France developed its own national nuclear force in the mid-20th century is well-known. Titles like *The Evolution of Nuclear Strategy: France, NATO, and the Limits of Independence 1981–97* and *Norstad: Cold War NATO Supreme Commander* focus on the position of France in the European system after World War I and World War II, and specifically how the advent of the atom bomb became the new

¹⁰ Jan Techau, *Forget CSDP, It's Time for Plan B*, August 26, 2011, <http://carnegieendowment.org/2011/08/26/forget-csdp-it-s-time-for-plan-b/5zr8>, accessed September 06, 2012; European Union, *A Secure Europe in a Better World- European Security Strategy*, Security Strategy, Brussels: European Union, 2003; European Union, *Report on the Implementation of the European Security Strategy*, Security Strategy, Brussels: European Union, 2008.

¹¹ *Ibid.*, Yehoshafat Harkabi, *Nuclear War and Nuclear Peace* (Washington, D.C.: Library of Congress, 2008).

¹² Simon Rogers and John Burn-Murdoch, Eurozone Debt Crisis, August 02, 2012, <http://www.guardian.co.uk/news/datablog/2011/nov/07/euro-debt-crisis-data>, accessed August 11, 2012.

¹³ Observateur, Le nouvel, TRIBUNE. Holland: "Nuclear Deterrence: I will maintain," December 20, 2011, accessed July 18, 2012, http://translate.googleusercontent.com/translate_c?hl=en&prev=/search%3Fq%3D%2522Dissuasion%2Bnucl%25C3%25A9aire%2B%2Bje%2Bmaintiendrai%2522,%2Bpar%2BFran%25C3%25A7ois%2BHollande%26hl%3Den%26lr%3Dlang_en%26sa%3DX%26biw%3D1440%26bih%3D796%26tbs%3Dir:lang_.

credential for the status of great power.¹⁴ Nuclear weapons were seen more as a symbol and bargaining chip on the international stage. As such, de Gaulle undertook to create a national nuclear force that would give France security and a say in global affairs.¹⁵ These developments created certain frictions within the trans-Atlantic alliance—some of which were entirely welcome to the independence-minded de Gaulle and his ideological fellows.

The intransigent French insistence on both fashioning an autonomous nuclear force and retaining absolute national control over these weapons ultimately led to France's partial rupture with NATO during the tenure of General Lauris Norstad (SACEUR). Robert Jordan notes that France's aims to control nuclear weapons were "motivated both by prestige and by a desire to become less dependent upon the U.S."¹⁶ De Gaulle's wartime experience with the Anglo-Americans left him even less inclined to cede even a hint of control of his nuclear assets to distant and distracted allies.

Immersed in the weight of this history, French leaders have made the government's policies on nuclear weapons both provocative and restrictive. Scholars like Bruno Tertrais, David Yost, and others have detailed French nuclear policies to be carefully installed to clearly display France's willingness to use nuclear weapons as a first strike weapon, but also show the French people that such weapons would only be used to protect France's vital interests.¹⁷

Most texts discuss other European nation's feelings about the continent being protected further by France and perhaps less by the United States (through NATO). But

¹⁴ Robert S. Jordan, *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin's Press, INC., 2000); Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St Martin's Press LLC, 2003); Anand Menon, *France, NATO and the Limits of Independence 1981–97* (London: Antony Rowe Ltd, Chppenham, Wiltshire, 2000).

¹⁵ Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St Martin's Press LLC, 2003).

¹⁶ Robert S. Jordan, *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin's Press, INC., 2000), 105.

¹⁷ David Yost, *Adelphi Papers, number 194, French Deterrence* (London: The Garden City Press Ltd, Letchworth, 1984); David Yost, "France's Evolving Nuclear Strategy," *Survival*, 2005: 117–146; David Yost, "France's new nuclear doctrine," *International Affairs*, 2006: 701–721; Bruno Tertrais, *A Comparison Between U.S., UK And French Nuclear Policies And Doctrines*, Paris: Chercheur associe au CERI, 2007; Bruno Tertrais, "France," In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 103–132 (New York: Oxford University Press, 2010).

with the situation being as delicate as it is, France's first-use policy has many other European nations on edge about an increased French position on the nuclear stage.¹⁸ The first-use, or final warning, policy is the strategy that France has adopted to respond to aggression. With a limited supply of nuclear weapons and the threat of a large scale attack, France needed a forceful policy to where Paris would strike with nuclear weapons first, which would deliver an unacceptable level of damage to a belligerent and deter them from carrying out further aggression. The ambitious policy was harmful to the rest of Europe because by France launching a preemptive nuclear strike, Europe would now be a nuclear battlefield with no other continental nation had the ability to use its own deterrent (because they had none).¹⁹

There are problems that can arise from a nuclear shift in Europe. First, the domestic feelings towards nuclear weapons are negative.²⁰ Gabrielle Hecht covers public polls from 1946 until the mid-1960s which ask the French public whether the government should have an atomic weapon, with an initial response of 56 percent wanting a weapon and moving downward to just 23 percent in 1967.²¹ Lawrence S. Wittner compliments the argument by discussing the numerous protests and revolts against nuclear power and nuclear weapons.²² Even today the BBC has noted nuclear protests in France and Britain in 2011 after the nuclear disaster in Japan.²³ With a clear message sent to the French government about the utility of disarmament, why does the government seek to build its forces to take on a larger role in Europe?

¹⁸ Robert S. Jordan, *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin's Press, INC., 2000); Anand Menon, *France, NATO and the Limits of Independence 1981–97* (London: Antony Rowe Ltd, Chppenham, Wiltshire, 2000).

¹⁹ Bruno Tertrais, *A Comparison Between U.S., UK And French Nuclear Policies And Doctrines*, Paris: Chercheur associe au CERI, 2007; Bruno Tertrais, "The Last to Disarm? The Future of France's Nuclear Weapons," *Nonproliferation Review*, Vol. 14, 2007: 251–273; David Yost, "France's Evolving Nuclear Strategy," *Survival*, 2005: 117–146.

²⁰ Angus Reid Global Monitor, *Angus Reid Public Opinion*, September 18, 2007, accessed August 01, 2012, http://www.angus-reid.com/polls/27829/global_poll_finds_varied_views_on_nuclear_weapons/.

²¹ Gabrielle Hecht, *The Radiance of France* (Boston: Massachusetts Institute of Technology, 1998), 243.

²² Lawrence S. Wittner, "The Forgotten Years of the World Nuclear Disarmament Movement, 1975–78*," *Journal of Peace Research* Vol 40, 2003: 435–456.

²³ BBC, *Anti-nuclear protests in Germany and France*, April 2011, 2011, <http://www.bbc.co.uk/news/world-europe-13188507>.

The topic of disarmament does show convergence between the two entities and while universal disarmament is the goal, neither the French government nor the French people want to be the first nuclear nation to completely dissolve their nuclear program. In the 2007 Angus Reid poll noted earlier, the French people show a clear division between using nuclear weapons in war and using nuclear weapons as a deterrent against attack. The poll shows that twice as many people in France welcome nuclear weapons as a deterrent force and only 15 percent of the French people want to use such weapons in a war.²⁴ While French citizens have been skeptical of their government, they are committed to universal disarmament, as long as France is not the first to commit to it whole heartedly. With the history between the French Government and the citizens strained in pockets from 1789 until the present, France must continue to strive for universal disarmament and not provoke more civil unrest within her borders that may cause instability in the region.²⁵

With the potential internal struggle, France's external tussles also pose a threat that also point to the maintenance of its position in nuclear affairs. With a larger concern for terrorists acquiring nuclear weapons and an increased threat of newly formed nations with infant governments as annotated in the European Security Strategy (2003), the threat of an asymmetric nuclear exchange is particularly heightened. Any sudden change in the French policy may result in an escalation of tensions and result in unintended consequences. Many international situations can be solved by democratic means, but nuclear weapons are based on realistic principles. John J. Mearsheimer describes nuclear weapons and specifically the arms race in terms of offensive and defensive realism. Mearsheimer believes that once a country goes nuclear, there thirst for power does not stop.²⁶ There may be no way to avoid situation where the smallest shift in posture, policy or technology may cause another Cold War. The potential re-emergence of another Cold

²⁴ Angus Reid Global Monitor, *Angus Reid Public Opinion*, September 18, 2007, http://www.angus-reid.com/polls/27829/global_poll_finds_varied_views_on_nuclear_weapons/.

²⁵ IBID., *Monitor*, Angus Reid Global Monitor, *Angus Reid Public Opinion*, September 18, 2007, http://www.angus-reid.com/polls/27829/global_poll_finds_varied_views_on_nuclear_weapons/.

²⁶ John Mearsheimer, *Tragedy of Great Power Politics* (New York: W. W. Norton & Company, Inc., 2001).

War is all the more reason to maintain the status quo while working with the international community to universally disarm all nuclear weapons. Consider recent events surrounding the United States, France and Russia involving the modernizations of their nuclear weapons.

Washington has proposed a significant upgrade and modernization program including modernization to every point of the nuclear triad, requesting more than \$110 billion in funding for fiscal year 2013.²⁷ The French, beginning in 2008, have begun to replace the existing ballistic missile submarines with the new Le Triomphant Class submarine. We have also seen the implementation of the M51.1 ballistic missile to be carried by the new submarines.²⁸ Moscow has also been improving its nuclear forces since the late 1990s and continues through the present.²⁹ Although the original Cold War context of security was based on the numbers of nuclear weapons, which caused the arms race, the nuclear powers may already be engaged in an arms race based upon the level of efficiency and redundancy within each nation's nuclear force. With the innovations happening not for the fear of a terrorist agency possessing one weapon, but because of other nuclear nations cultivating their nuclear abilities, their actions may exacerbate the nuclear instability throughout the globe.³⁰ With the European Union focused on nuclear terrorism and France seemingly more concerned over nuclear armed nation states, France cannot convince the continent to support the French aspirations and Paris should focus on strengthening NATO, the EU, and the UN while maintaining a national autonomous deterrence.

²⁷ Kelsey Davenport, *Fact Sheet: U.S. Nuclear Modernization Programs*, March 22, 2012, <http://www.armscontrol.org/factsheets/USNuclearModernization>.

²⁸ Wade Boese, *France Upgrades, Trims Nuclear Arsenal*, 2008, http://www.armscontrol.org/act/2008_04/France.

²⁹ Pavel Podvig, *Russia's Nuclear Forces: Between Disarmament and Modernization*, Nuclear Forces, (Security Studies Center, 2011).

³⁰ NATO, *Deterrence and Defense Posture Review*, May 20, 2012, http://www.nato.int/cps/en/natolive/official_texts_87597.htm?mode=pressrelease, accessed August 21, 2012; European Union, *A Secure Europe in a Better World- European Security Strategy*, Security Strategy, Brussels: European Union, 2003; European Union, *Report on the Implementation of the European Security Strategy*, Security Strategy, Brussels: European Union, 2008.

D. FRANCE AND THE HAPPY MEDIUM

With the continual importance placed on nuclear weapons, how will France's nuclear policies and practices uphold the status quo or perhaps modify its nuclear sector in a way that will not provoke increased aggression? To answer this question, this thesis will undertake a case study of the history of French nuclear weapons development and the policies associated with it, the current nuclear dynamic inside Europe and what will a potential shift in the French nuclear department cause in the international arena. Using historical and contemporary literature pertaining to nuclear weapons, the thesis will further develop the role of history and aspirations of grandeur play in the current and future endeavors of France. The emphasis of the historical section is intended to display consistencies between scholars who are intimately familiar with the topic and to further advance the underlying reasons to the development of an independent nuclear force. The section on current events will develop an area previously undeveloped, the necessary infrastructure for France to make good on its promise.

With the current nuclear dynamic, the intent is to show a clear shift in policy through Cold War and the 2001 attack on the World Trade Center. This shift in threats within the last two decades from an established national threat, such as Russia, to a threat posed by a failing state or terrorist organization possessing nuclear weapons. The change in threats displayed by the European Security Strategy (2003) correlates to the French insinuating a policy where, "missiles would not be oriented in only one direction... at every point of the compass."³¹ The aggressive posture is valuable to France and may also be for Europe, but this thesis will show the continued importance to maintain the status quo and to have Paris continue to work closely with NATO to further develop and promote the NPT for the purpose of non-escalations throughout the globe. Among other sources, this aspect of the research will rely on opinion polls that will again show the

³¹ Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St Martin's Press LLC, 2003), 307.

connection between the French citizen and politics, which will underscore the need for Paris to maintain its current position in nuclear affairs.³²

With the sensitivity of nuclear weapons, this thesis will show that France's numerous protestations about an expanded role fulfill France's aspirations for a larger role. From Charles de Gaulle in the late 1950s to President Hollande in 2011, numerous top French officials continue to want to provide deterrence for Europe.³³ French officials either make a direct connection to Europe and commit to NPT or cloak their aspirations for an expanded nuclear force by stating that France will protect its vital interests.

This thesis will show that merely showing its willingness can add a deterrent effect and that France should not actively pursue the goal of a larger role. NATO has acknowledged that France, not allowing its nuclear weapons to be placed under NATO's controls, has a deterrent effect within Europe without having to alter any facet within Paris. This inclusion by NATO should be the happy medium that France needs to maintain its prestige and not hurt its own political or financial status.³⁴

E. THE WAY AHEAD

The French nuclear weapons issue and the way in which France should move forward form an important topic that deserves to be developed. To do this, the thesis will first discuss the importance of French history dating back to the French Revolution and through the current events of today's global issues. With the chapter revealing the importance of NATO maintaining nuclear deterrence, the history of NATO and its reliance on U.S. nuclear weapons to safeguard Europe and how NATO intends to continue to deter outside aggressors from attacking the EU. Once the history of the two

³² IBID., European Security Strategy (2003); Angus Reid Global Monitor, *Angus Reid Public Opinion*, September 18, 2007, http://www.angus-reid.com/polls/27829/global_poll_finds_varied_views_on_nuclear_weapons/.

³³ Observateur, Le nouvel, TRIBUNE, Holland: "Nuclear Deterrence: I will maintain," December 20, 2011, http://translate.googleusercontent.com/translate_c?hl=en&prev=/search%3Fq%3D%2522Dissuasion%2Bnucl%25C3%25A9aire%2B%2Bje%2Bmaintiendrai%2522.%2Bpar%2BFran%25C3%25A7ois%2BHollande%26hl%3Den%26lr%3Dlang_en%26sa%3DX%26biw%3D1440%26bih%3D796%26tbs%3Dlr:lang.

³⁴ NATO, *Strategic Concepts*, November 2010, http://www.nato.int/cps/en/natolive/topics_56626.htm?selectedLocale=en.

institutions is established, the discussion will look at the current domestic and international factors that influence France and NATO's nuclear policy. The history and current factors of France and NATO's U.S. nuclear weapons will help in the establishment of the way ahead for each entity and why each has chosen a certain path for the future.

The next section of the thesis brings the argument further in which France cannot and should not take a larger role in nuclear deterrence of Europe because of other EU nations being skeptical and the domestic circumstances within France cannot support such a bold venture. The final chapter will draw conclusions to the importance to have France maintain the status quo within the international community. The possible consequences of continued empty statements may only rock the figurative boat and by not maintaining, France may cause other nuclear nations to become more irritated and make a more volatile situation.

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II. NUCLEAR GRANDEUR: THE PAST AND THE PRESENT OF FRANCE'S NUCLEAR POSTURE

French nuclear strategy is as much a product of French history as it is of French science, industry and technology. Indeed, most of the hallmarks of the French approach to nuclear weapons—including most prominently the sense of decline and disadvantage that impels the French to ply an independent nuclear track in the name of national honor and prestige—owe to French history and its experience of force and statecraft. Specifically, the factors that have informed French nuclear strategy since the end of World War II were present at the creation of the first French republic in 1789 and show themselves in strategic culture which forms the subject of this chapter. Because the past is so present in French strategic thinking and strategic culture, this chapter explores the developments that inform the French security policy and its stance on nuclear weapons today as well as the current-day manifestations of these historical trends in French nuclear strategy and policy.

A. REVOLUTION AND ITS DISCONTENTS

While the true aggrandizement began in the 19th century, the time before the French Revolution, France was viewed as one of, if not, the most prominent powers in the west, at the forefront of European culture and a formidable player in the region's foreign relations as well. The French Empire controlled vast lands and wealth.³⁵ As so many of the other established European powers, France had a feudal system in place, which bound people to certain "estates." The first estate housed the Church, the second estate contained Nobility and the third comprised everyone else—including the newly self-aware middle class, skilled artisans, and would-be industrializers.³⁶ (By the dawn of the Absolutist age, the king sat separately from all three estates to order affairs among them according to God's will.) When the old social order—and the laws that sustained the status quo—could neither fulfill the third estate's growing desire for a voice in its

³⁵ *French Colonial Empires*, n.d., accessed October 10, 2012, <http://www.thelatinlibrary.com/imperialism/notes/frenchempire.html>.

³⁶ Alexis De Tocqueville, *The Old Regime and the French Revolution* (New York: Doubleday, 1955).

own governance nor completely quell the agitations that arose amid this frustration, France was consumed by revolution.

Alexis De Tocqueville describes the ultimate goal of the French Revolution as:

The French Revolution's approach to the problems of man's existence here on earth was exactly similar to that of the religious revolutions as regards his afterlife. It viewed the 'citizen' from an abstract angle, that is to say as an entity independent of any particular social order, just as religions view the individual, without regard to nationality or the age he lives in. It did not aim merely at defining the rights of the French citizen, but sought also to determine the rights and duties of men in general towards each other and as members of a body politic.³⁷

The French Revolution thus was an attempt to close the gap between the government and the people. Initially, the struggle to break out of the *ancien regime's* estates structure culminated with a constitution. Then this bourgeois revolution gave way to a much more radical agenda—and leaders willing to resort to state-sponsored violence, denunciation, and ideological “spot checks” to effect this social engineering. With French society roiling amid escalating instability and France's neighbors/enemies massing at its borders to seize by arms any advantage that might have come from the unsettled situation, Napoleon staged a coup d'etat, he believed, to return France to some semblance of preeminence. The French public, in its turn, not only accepted but embraced a strong executive—culminating when Napoleon crowned himself emperor in 1804—in the name of restoring order at home and finding glory over the borders.³⁸

Although Napoleon could claim domestic and foreign successes only for a short while—and, arguably, his overreach in 1812 began the process of decline from which France has yet to recover intellectually or politically, the French public ever since has sought a leader who is strong and passionate about Paris. Figures from Napoleon III, Petain and de Gaulle all show similar traits in that they are highly centralized in their belief of government control, but were all elected by the people.

³⁷ Ibid., 12.

³⁸ Michael Burleigh, *Earthly Powers* (Great Britain: HarperCollins, 2005).

B. NAPOLEON GOES NUCLEAR

France's nuclear weapon's policy began in the mid-20th century, but the real motivating ideals and guidelines had been imprinted into French culture much earlier. The traits manifested especially in revolutionary and post-revolutionary France carried over into policies and in the context of nuclear weapons as embodiment's French national power. The desire to gain and maintain prestige was important to French leaders and pairing the French ideal with military technology was de Gaulle's way of regaining the prestige that France has lost or has thought it lost, most recently with the ignominy of defeat, occupation, and collaboration with the Nazis in World War II.

Charles de Gaulle agreed with the technocrats, who believed technology and grandeur are linked, and began investing in technological development. De Gaulle believed technology could not only revive French preeminence, but improve relations with its former colonies and increase French standing in international affairs. A collection of scientists and technical experts, The Groupe 1985, had this to say about the change of France:

The first unexpected challenge is the intellectual and cultural survival of an original and individual France. Indeed this scientific civilization will increasingly tend to attenuate national specificities and deformities. From now on our presence in the world depends on our ability to imprint our mark on this civilization by means of significant contributions from French technology and French science.³⁹

The quote, even though it comes somewhat later into the technological development, echoes historical references to the critical linkage between French preeminence and technology, in this case nuclear. (It also demonstrates the persistence of this linkage.) France looked to its technical experts who proposed that technologic reform could bring France back to a position of primacy. France certainly had the technical knowledge and could certainly pursue technical achievements because of its numerous Nobel Prize winners in the fields of physics and chemistry.

³⁹ Ibid., 39.

Thus, the nuclear era of France began in earnest with the Fifth Republic of Charles de Gaulle and his *politique de grandeur* in 1958. France, with the advent of de Gaulle and Gaullism, continued a trend of strong executives as the antidote for real and perceived decline that had been endemic in the III and IV republics in the period from the 1930s until the end of the 1950s. Robert Neumann noted that the General, as he called de Gaulle, “was not averse to democratic control.... But he demanded that he should be left alone to govern while he was in office.”⁴⁰ Neumann emphasizes that Gaullism (and de Gaulle himself) believes this style of government equate with “the welfare of the country and the state.”⁴¹

This very muscular presidency is written into the very constitution of the Fifth Republic. Articles 5 through 19 delineate the authority of the president of the republic. Article 5 states: “The President of the Republic shall ensure due respect for the Constitution. He shall ensure, by his arbitration, the proper functioning of the public authorities and the continuity of the State. He shall be the guarantor of national independence, territorial integrity....”⁴² Article 15 takes the authority of the president to protect France into leading military forces by saying, “The President of the Republic shall be Commander-in-Chief of the Armed Forces.”⁴³ The last article in the constitution also displays traditional concerns for control. Article 16 discusses emergency powers for the president. Article 16 grants emergency powers to the president, after consulting the Prime Minister, Houses of Parliament and the Constitutional Council, for the purpose of protecting France. These powers given to the president are authorized for a period of 30 days and the decisions may be referred to the Constitutional Council by the rest of government to decide whether or not the actions taken by the president shall continue.⁴⁴

⁴⁰ Robert G. Neumann, “Formation and Transformation of Gaullism in France,” *The Western Political Quarterly*, Vol. 6, No. 2, 1953: 250–274, 251.

⁴¹ Ibid.

⁴² The National Assembly, *Constitution of October 4, 1958*. 2012, <http://www.assemblee-nationale.fr/english/8ab.asp#II>.

⁴³ Ibid.

⁴⁴ Ibid.

The French White Papers echo the language presented in the Constitution by relating presidential powers to nuclear weapons and deterrence. Section 11 of the White Papers, states that, “Our nuclear deterrent will continue to be fully independent, with the relevant capabilities at the disposal of the President.”⁴⁵ As Neumann writes, “For this contingency, [the president] wants to preserve his movement, and especially his prestige as a peerless leader in desperate times.”⁴⁶ In this sense, then, basic French nuclear policy represents a clear continuity in French history: the strong executive.

In its independence, it also reflects the French quest to keep their country among the ranking powers of the world. In this connection, the Final Warning Concept embodies every aspect of French nuclear policy. The concept revolves around a heavy threat from the French, which coupled with the vague language and policy gave France the edge in Europe. France’s strong language on the topic an aggressive move against the French was a warning that if France’s vital interests were threatened, it would launch a limited nuclear strike to halt the aggression and if such aggression did not cease, Paris would launch an all-out nuclear strike. Any potential belligerent would, in theory, suffer such destruction that it would then turn back and not retaliate. Tellingly, these doomsday scenarios imagine France acting alone in its own nuclear defense.

C. FRENCH NUCLEAR HISTORY

Before France could construct nuclear weapons, Paris had to develop its own nuclear energy program. Although the initial French thrust into the nuclear arena was stable nuclear power, it quickly transitioned into nuclear weapons. In December 1948, the first nuclear reactor nicknamed ZOE (Zero power, uranium Oxide fuel, and Eau lourde) went critical. Throughout the 1950s, an additional three reactors were built (EL-2, G-1 and G-2) and provided the initial material to process for nuclear weapons. Today, France has built more than 20 nuclear power plants throughout the country and touts its civilian

⁴⁵ Presidency De La Republique, *The French White Paper on Defense and National Security*, National Security, Paris: French Republic, 2008, 30.

⁴⁶ Robert G. Neumann, “Formation and Transformation of Gaullism in France,” *The Western Political Quarterly*, Vol. 6, No. 2, 1953: 250–274, 273.

nuclear program even while such neighbors as Germany have sought to de-nuclearize the national power grid.

Although the initial French thrust into the nuclear arena was stable nuclear power, it quickly transitioned into nuclear weapons. In fact, the French started their atom-bomb-making efforts almost as soon as World War II ended. A nuclear weapons program requires the extraction and enrichment of certain nuclear elements to be able to produce weapons-grade nuclear material. Le Bouchet, built in 1949, was the first facility in France to begin extracting plutonium from the spent fuel rods from ZOE. The process became more fruitful with the completion of France's second reactor located to the Southwest of Paris, at Saclay. A second facility designed to extract materials became operational in Marcoule (located at the site of the G-1 facility) in 1959. With the initial building blocks now in place, American intelligence believed France was ready to start developing a nuclear device. In a weekly intelligence summary by the Central Intelligence Agency (CIA), the opening sentence captures the reality of French ambitions by saying, "France now may have the capability of exploding a nuclear device of nominal yield at any time, and intensive preparations for a test have been reported recently."⁴⁷

It was not until December 1954 that Pierre Mendes-France, the Prime Minister at the time, authorized the production of France's first atomic bomb. The initial go-ahead could have been issued earlier in the year, but domestic concerns over nuclear weapons stifled development for a few months. Paris detonated its first nuclear bomb on February 13, 1960, with the predecessor of what would be the first operational warhead. The AN-11 and later the AN-22 warheads were a plutonium-based fission weapon designed for gravity bombs. These early weapons had a yield of up to 120 kilotons. Rather than rely on its allies, France fielded these two warheads, in addition to the MR-31 missile-launched warhead, as strategic weapons for the sole purpose of protecting France.

⁴⁷ Central Intelligence Agency, *Current Intelligence Weekly Summary 18 September 1958*, Intelligence (Washington, D.C.: CIA, 1958).

1. Land-based Nuclear Missiles

The first initiative, taken on by the Society for Research and Development of Ballistic Engines (SEREB), was to create a land/sea-based missile with an approximate range of just over 1600 nautical miles. The result was the SSBS series missile. The missile, which was 50 feet tall and four feet wide, was capable of propelling a warhead approximately 300 miles and successfully launched in 1965.⁴⁸ As SEREB continued developing land/sea-based missiles, the SSBS matured to the SSBS S01, SSBS S02 and ended with the SSBS S3. The SSBS S3, created in the 1980s, had a range of 2140 miles and able to carry a 1200 kiloton nuclear warhead. The most recent missile, stationed in the South of France, would be capable of hitting targets as far away as Moscow. The land-based nuclear missiles stood their last day of watch in 1996, when France, in accordance with the nuclear nonproliferation treaty (1968), decided to end the program and rely solely on submarine-launched and air-launched systems. With the shared delivery system technology, the issue for France was to create a delivery platform that would best suit the missiles capabilities.⁴⁹

2. The French Nuclear Navy

The nuclear submarine was first successfully demonstrated by the Americans in 1955, with the launching of the *USS Nautilus*.⁵⁰ The nuclear submarine was the ideal choice for the up-and-coming nuclear triad due to its endurance. These vessels were only limited by the men's need of food, supplies and family. The vessels could submerge for long periods of time and await the command to deliver a nuclear payload anywhere in the world.⁵¹

⁴⁸ Encyclopedia Astronautica, *SSBS*, n.d., accessed November 20, 2012, <http://www.astronautix.com/lvs/ssbs.htm#more>.

⁴⁹ Ibid., United Nations, *Non-Proliferation of Nuclear Weapons*, May 3, 2010, accessed July 07, 2012, <http://www.un.org/en/conf/npt/2010/background.shtml>.

⁵⁰ Gary E. Weir, *Silent Defense*, April 27, 1999, accessed November 26, 2012, <http://www.navy.mil/navydata/cno/n87/history/fullhist.html>.

⁵¹ The authors understanding of the present nuclear submarine force from currently being on active duty as a Lieutenant Surface Warfare Officer. The author served onboard the *USS Oscar Austin (DDG79)*, where he was trained in anti-submarine warfare and the general aspects of all warfare areas, to include nuclear submarines.

France, noting the initial U.S. success, set out on a separate and independent nuclear submarine development project. March of 1963, marked the authorization to build the *Le Redoutable*, a 128 foot, 8,000 ton ballistic missile submarine. She was designed to submerge to great depths, maintain a speed of over 20 knots while underwater and more importantly to this discussion, carry 16 M20 submarine launched ballistic missiles with a range of 3100 kilometers (1673 nautical miles). *Le Redoutable* was completed in 1971 and by 1977, the French had a force of four submarines capable of fulfilling the *Force de Dissuasion* (now known as the *Force de Frappe*).

With missile development continuing to produce more capable delivery systems for submarines, France built the *L'inflexible*. While the general design of the previous class of submarine remained unchanged, advances in the propulsion and weapons systems were improved to handle the Exocet anti-ship missile and the M4 SLBM.⁵² The M4 came into existence in 1985 as the fourth generation of Mer-Sol-Balistique-Strategique (MSBS) family of submarine-launched ballistic missiles. The M-4 (A/B Models), and eventually the M-45 and M-51 missiles, were developed as an intermediate-range missile capable of carrying a sizable nuclear warhead anywhere from 4,000 to 6,000 kilometers (2160–3240 nautical miles). The current system onboard the current *Le Triomphant* class SSBN (of which four are operational) will be equipped with the M-51 delivery vehicle for the foreseeable future.⁵³

3. Nuclear Aviation

France, beginning in 1954, simultaneously began development of nuclear submarines and aircraft capable of carrying nuclear bomb/missiles. The leading company for the development was Dassault. The company sought to take the Mirage III design and re-design it to carry the AN22 nuclear bomb. The Mirage IV had a two-person crew, inflight refueling capable, dual engine and had a range of 1600 kilometers (863 nautical

⁵² *L'Inflexible Class*, 2013, accessed December 20, 2012, http://www.military-today.com/navy/linflexible_class.htm.

⁵³ *Nuclear Weapons*, July 24, 2011, accessed December 21, 2012, <http://www.globalsecurity.org/wmd/world/france/nuke.htm>.

miles) with one nuclear bomb attached to it. By 1964, the Mirage IV was delivered to the French air force and the more than 50 planes continued to serve until 1996.

The next generation Mirage 2000N would replace the Mirage IV in 1983. The Mirage 2000N had no other function than to deliver nuclear payloads to an enemy. Again, with most of the rest of the French nuclear capable aircraft, the range leaves much to be desired. The 2000N has a range of 800 nautical miles, which would allow the bomber to fly as far as the Ukraine and Belarus.⁵⁴

Just recently, Paris has purchased the Rafale F3 Bomber to replace the Mirage 2000N in 2009. The Rafale boasts numerous upgrades and is a multi-role aircraft that can carry numerous weapons including the ASMP nuclear missile. For France's aspirations of regional deterrence, the Rafale helps to widen the range of its nuclear deterrence to just short of 1000 nautical miles.⁵⁵ The nuclear dyad Paris boasts has credibility with regards to France, but coupled with French nuclear strategy leaves people wanting more. Before one can get to strategy, a budget and currency must be established to form a strategy that can be sustained by monetary funds.

D. FRENCH DETERRENCE

Once de Gaulle began to develop offensive nuclear weapons technology, he needed to generate credible policies, keeping with the French traditions and beliefs, to protect France. For de Gaulle,

[t]he main role he saw for France's nuclear force was determined by his view that nuclear weapons were the major source of contemporary international power and influence... Later he saw nuclear weapons as a way of providing France with a distinctive identity and a power base from which to criticize the hegemonic aspirations of the United States.⁵⁶

⁵⁴ R. Colon, *The Jet Age*, n.d., accessed January 08, 2013, http://www.century-of-flight.net/Aviation%20history/jet%20age/france_nuclear.htm.

⁵⁵ Staff Writer, *The Dassault Rafale Had Already Reached Development by the Time Dassault Mirage 2000 Reached Operational Status*, September 23, 2012, http://www.militaryfactory.com/aircraft/detail.asp?aircraft_id=60.

⁵⁶ Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St Martin's Press, 2003), 305.

Some of the first meetings to discuss credible deterrence were held in the summer of 1956. Top officials in France (military and civilian) sat down with General Pierre Gallois, a leading military official and noted international strategist supporting an autonomous nuclear arm, to lay the foundation of what presently became the *Force de Frappe*. General Gallois urged the move toward nuclear weapons. Gallois also advised French leadership to develop a one way nuclear force. During the meeting General Gallois stated, “He [Gallois] evidently advocated a one-way nuclear striking force as the most feasible kind of French deterrent.”⁵⁷

The French deterrent (or dissuasion as Frenchmen call it) has always been on the aggressive side. Bruno Tertrais, a noted scholar on French nuclear weapons, repeatedly uses the word “preeminence” to describe French nuclear policy.⁵⁸ Tertrais demonstrates the need for France to be in a dominant position and the concurrent belief that France is not a second-tier nuclear power. The deterrence focuses on a highly centralized government with a select few in charge of decision-making.

It also aspires to a very prominent role in European defense for France and its nuclear weapons. Dr. David Yost notes that Jacques Chirac, then Prime minister, said in 1975, “we cannot be content to “sanctuarize” our own territory, and we must look beyond our frontiers’....”⁵⁹ The 1990s also showed a different tactic by Paris to engage Europe on regional deterrence by talking to Germany. France tried to include Germany under its nuclear umbrella and sign a bilateral agreement in 1995 to which Klaus Kinkel, the German Foreign minister, said that Germany had, “no intention of taking part in a nuclear force, ‘even by the back door’.”⁶⁰ The attempt to create a bilateral agreement with Germany made Russian president Boris Yeltsin to describe the French attempt as a,

⁵⁷ Wilfred L. Kohl, *French Nuclear Diplomacy* (Princeton: Princeton University Press, 1971), 25.

⁵⁸ Bruno Tertrais, “France,” In *Governing the Bomb: Civilian Control and Democratic Accountability of Nuclear Weapons*, by Bates Gill and Heiner Hanggi Hans Born, 103–131 (Oxford and New York: Oxford University Press, 2010).

⁵⁹ Ibid.

⁶⁰ Liberation. *Concerted Deterrence: Germany Reluctant*. September 09, 1995. <http://translate.google.com/translate?hl=en&sl=fr&u=http://www.liberation.fr/france/0101153758-dissuasion-concertee-l-allemande-reticente&prev=/search%3Fq%3D1995%2Bdissuasion%2Bconcertee%26hl%3Den%26tbo%3Dd%26biw%3D763%26bih%3D492&sa=X&ei=Whv4UKunMifxiwKD>.

“mistake” and the “decision is unexpected and wrong.”⁶¹ The grumblings of the former Soviet Union did not stop France from continued claims to reach its perceived goal.

The new millennium began with President Chirac issuing a speech in June of 2001, in which he touched upon nuclear issues. He stated,

Finally, it is France’s wish that our nuclear deterrent also contribute to Europe’s security. It thus participates in the overall deterrent that can be exerted by the democracies joined together by the treaty of collective security concluded, over 50 years ago, by Europe, the United States and Canada. In any case, it is up to the president of the [French] Republic to assess the harm that might be done to our vital interests in a given situation. This assessment would naturally take into account the growing solidarity of the countries of the European Union.⁶²

President Chirac continued his public speeches in 2006, when he addressed the French Air Force. He goes through the progression that even though in 2006 there was, according to Chirac, no direct threat from a major power, the future may still present a threat from states. The French president moves on to discuss the current globe is still seeking new balances of power and members of the global community are trying to unbalance the global situation. It is on page 4 of his speech that President Chirac introduces the expanded role of France in nuclear deterrence. Chirac states,

The integrity of our territory, the protection of our population, the free exercise of our sovereignty will always be the heart of our vital interests. But they are not beyond. The perception of these interests is changing pace with the world marked by the growing interdependence of European countries and also by the effects of globalization. For example, safeguarding our strategic supplies or defense of allied nations, are, among others, interests that must be protected.⁶³

The successor to President Jacques Chirac, Nicolas Sarkozy, continued the legacy of other French officials when he was present for the launch of the nuclear submarine *Le Terrible* in 2008. He moves through his speech and discusses the continued need for nuclear weapons to provide both national and international deterrence. President Sarkozy

⁶¹ Ibid.

⁶² David Yost, “*France’s Evolving Nuclear Strategy.*” *Survival*, 2005, 117–146, 131.

⁶³ Jacques Chirac, *Speech given to the Airforce and Strategic Ocean*, Brest, 2006, 4.

states, “As for Europe, it is a fact: By their very existence, French nuclear forces are a key element in Europe’s security.”⁶⁴ An even more convincing statement to the question of what France perceives its role to be comes directly after the previous quote and he states, “I propose to engage those European partners who would so wish in an open dialogue on the role of deterrence and its contribution to our common security.”⁶⁵ While Sarkozy and his successor now president Francois Hollande have very different views on certain topics, one area where they agree is their aspirations to promote regional nuclear deterrence.

In one of the first articles posted during his attempt to become president, candidate Hollande (at that time) maintained that he would maintain French nuclear deterrence. Hollande said, “Our efforts for world peace, for disarmament and for European integration, is consistent with our desire to preserve the vital interests of our nation.”⁶⁶ Again, the current president of France maintains decades of French perceptions of providing nuclear deterrence for the rest of Europe.

⁶⁴ Nicolas Sarkozy, “Presentation of Le Terrible in Cherbourg,” Cherbourg, March 21, 2008.

⁶⁵ Ibid.

⁶⁶ Le nouvel Observateur, TRIBUNE. Holland: “Nuclear Deterrence: I will maintain,” December 20, 2011, http://translate.googleusercontent.com/translate_c?hl=en&prev=/search%3Fq%3D%2522Dissuasion%2Bnucl%25C3%25A9aire%2B%2Bje%2Bmaintiendrai%2522.%2Bpar%2BFran%25C3%25A7ois%2BHollande%26hl%3Den%26lr%3Dlang_en%26sa%3DX%26biw%3D1440%26bih%3D796%26tbs%3Dlr:lang_.

III. FRANCE IN THE EYES OF THE BEHOLDER: NUCLEARIZING INTERNATIONAL RELATIONS

Nuclear weapons have been the way in which France could rebalance power throughout the globe. While France looks at nuclear weapons as a way to become a bigger player in world affairs, the rest of the world may have other opinions of French traditions. While nuclear weapons may ease certain domestic political tensions for France, they raise their own specific set of international concerns, which also reflect the historical developments and ideas that have shaped each state as well as the international system of states since 1945.

The two major players within Europe that concern themselves with France are the United States of America and the European Union. The United States, for the purposes of nuclear affairs in Europe, works through the North Atlantic Treaty Organization and the European Union, which embodies the collective voice of European states. Since the end of World War II, France did not trust the United States and its security guarantees. The other European states, being ravaged from two total wars, were heavily reliant on the U.S. guarantee and were not ready to rely upon a fledgling European Community. The history of France may be irrelevant to other nations, but they form the basis for the rest of the European player's irritation with France.

This dependence on America created the trans-Atlantic link and provides a point of contest within Europe and the United States of America. The end of World War II shows the continued reliance on the Americans by the Europeans because of the severe state that the Europeans were economically and militarily, which eventually led to the creation of NATO and the U.S. led security of Europe. While most European states welcomed the U.S. security guarantees, Charles de Gaulle and the French became uncertain of the United States commitments.⁶⁷

⁶⁷ Robert S. Jordan, *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin's Press, INC., 2000).

A. A COLD HANDSHAKE BETWEEN THE FRENCH AND THE UNITED STATES

For the United States, the belief was that France was being difficult and somewhat un-grateful of the opportunities that America was providing to it and the rest of Western Europe. The United States began to build a defensive posture against the Soviet Union, including a significant European presence and eventually an extended nuclear deterrent. The dust had barely settled over occupied Germany when the United States came to believe that a strong—but allied—Germany would be central to holding back the Soviets. The French, who share borders with Germany, had seen what a militarized Germany can do to a continent and rallied against the American idea. With the growing tensions between the Soviets and the Europeans, France ultimately gave up its grievances about a re-armed Germany and fell in line with the western allies. While the United States, Europe, and France all looked east for the greatest threat, each had different reasons for its decisions and France chose to aspire to a top position in world affairs through nuclear means.⁶⁸

The United States also thwarted the French and United Kingdom during the Suez Canal crisis of 1956. The Suez, built in 1869 by the French engineer de Lesseps, had massive ties to France and Britain (who owned the largest portion of control). A 1936 treaty allowed British troops on the canal to maintain defensive posturing on the canal. By 1954, the Egyptian signed a treaty that removed British troops from the Canal Zone. Egypt began to become more assertive in the region and nationalized the Suez on 26 July 1956. Paris and London were caught off guard and angered the two capitals because they both owned stock in the canal company. France, UK and Israel joined forces and began to conceptualize military operations to take back the Canal. Washington spoke out against such actions and forced an immediate stand down in hostilities. The aggression shown by France, as well as the UK and Israel, drew Egypt closer to the USSR and created instability during the Cold War between the East and West. The episode in Egypt was

⁶⁸ Robert S. Jordan, *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin's Press, INC., 2000); Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St Martin's Press LLC, 2003); John C. Hopkins and Weixing Hu, *Strategic Views from the Second Tier* (New Brunswick: Transaction Publishers, 1995).

another example where The United States stepped in to stop a possible resurgence of colonialism. With both France and Britain former empires, the United States could not afford to be dragged into a conflict involving possible colonial aspirations.⁶⁹

Another issue erupted in 1958 over Intermediate Range Ballistic Missiles (IRBM). The United States of America, working through NATO, wanted to forward deploy IRBM's on the European continent in France and Britain. The Supreme Allied Commander Europe (SACEUR), General Norstad, had been engaged in placing IRBM's in France and Britain that would be under NATO's control. Charles de Gaulle was somewhat unhappy with the proposed arrangement and wanted a French military official to be incorporated into the IRBM chain of command. The French did not presume to gain total control, as the French military official would be subordinate to SACEUR. As time went on, the issue of control spilled over into the nuclear stockpile arena. France was under the impression that this agreement to stockpile NATO (U.S.) nuclear weapons was going to be handled in a more bilateral way as opposed to the SACEUR and U.S. belief being that all of the nuclear weapons would be under a multilateral NATO control. Now the dispute turned towards nuclear strategy. Again France sought to make a separate table for the "three" superpowers to develop a global strategy for NATO without the other nations consent. The United States never considered, and would be nervous about, having Washington, Paris and London conducting global atomic strategy without the other members. For de Gaulle, he was unhappy that NATO members who do not possess "global responsibilities"⁷⁰ (superpowers) taking part in nuclear planning decisions or blocking nuclear actions. With the handshake growing colder between the French and Americans, France was trying to build a counterweight to the U.S./UK and tried to entangle Germany, but Germany would honor its commitments. The German Chancellor, Konrad Adenauer, noted "de Gaulle's motives as reflecting an underlying animosity toward the 'Anglo-Saxon' Powers, coupled with a desire to line up the FRG [Federal

⁶⁹ United Nations, *Dag Hammarskjold*, February 07, 2013, <http://www.un.org/depts/dhl/dag/time1956.htm>, (accessed February 07, 2013).

⁷⁰ Robert S. Jordan, *Norstad: Cold War NATO Supreme Commander* (New York: St. Martin's Press, INC., 2000); Lawrence Freedman, *The Evolution of Nuclear Strategy* (New York: St Martin's Press LLC, 2003); John C. Hopkins and Weixing Hu, *Strategic Views from the Second Tier* (New Brunswick: Transaction Publishers, 1995).

Republic of Germany] and Italy as counterweights to his perception of the Anglo-American dominance in NATO.”⁷¹

By 1959, President Charles de Gaulle pulled out of the agreement to have the U.S. nuclear stockpile placed inside France. The French president also removed half of its Mediterranean from NATO’s control. The action of removing vessels immediately outraged SACEUR because these vessels were flying the French flag, but owned by the United States. French and U.S. relations were now at an all-time low. General Norstad, being worried about a tactical air defense plan, removed numerous squadrons from France and placed them in the Federal Republic of Germany. The true root of the air defense issue was France wanted the squadrons not to be armed with nuclear weapons unless those weapons were under French control (even though these were NATO weapons). The United States would not except this and moved the forces. These events set forth a path of France leaving the integrated military structure of NATO in 1966 and forged the non-relationships between the Europeans and the Americans. While the international community had its doubts about President de Gaulle’s country, France thought highly of itself and wanted to prove it to the world.⁷²

B. LUKEWARM EUROPE

The European Union has matured from the European Coal and Steel Community, European Economic Community, Western European Union and is now the EU who incorporates more than 25 European nations.⁷³ With all of the claims presented by France, there is always the same overall outcome, which is either a clearly defined no or an awkward silence that moves towards an obvious avoidance of the subject. Europe has been one of the most important test platforms for national and regional deterrence because it is the oldest contested region and the first where nuclear weapons were used to protect it. Germany has been consistent throughout its counter claims to France providing regional deterrence. Great Britain also resists the French claims and an even more

⁷¹ Ibid.

⁷² Ibid.

⁷³ European Union, *European Union*, 2012, http://europa.eu/index_en.htm, accessed October 20, 2012.

influential player who does not hear the assertions of Paris is the European Union. With the nearly 30 members of the European Union resisting the proposal and specific states declining bilateral agreements, France's role will not be a regional deterrent provider for Europe.

Throughout the history of the European Union (and its predecessors) there have been attempts to collaborate for common defense and security. Recently, The European Union has taken steps to create a European security identity by creating the European Security Strategy. In December of 2003, European nations agreed on the priorities for European security. The ESS places precedence on NATO and the United States in the third paragraph by stating,

The United States has played a critical role in European integration and European security, in particular through NATO. The end of the Cold War has left the United States in a dominant position as a military actor. However, no single country is able to tackle today's complex problems on its own.⁷⁴

France, being a part of both institutions, has no deterrence role within the EU for nuclear weapons. Throughout the 14 page document there is no mention of nuclear deterrence. The piece does identify nuclear weapons being a threat, among other things, and highlights the EU's partnership with NATO to enhance the abilities of both organizations. The EU discusses its partnership with NATO as, "The EU-NATO permanent arrangements, in particular Berlin Plus, enhance the operational capability of the EU and provide the framework for the strategic partnership between the two organisations in crisis management."⁷⁵ Further codifying the relationship between Europe and Washington was the section of the ESS dealing with partnerships. Europe believes, "The transatlantic relationship is irreplaceable. Acting together, the European Union and the United States can be a formidable force for good in the world."⁷⁶ These examples, or lack thereof, display Europe's commitment to NATO and the United States to provide

⁷⁴ European Union, *A Secure Europe in a Better World, European Security Strategy*, Brussels: European Union, 2003, 1.

⁷⁵ *Ibid.*, 12.

⁷⁶ *Ibid.*, 13.

mutually beneficial security guarantees. 5 years later an implementation report to show the progress of the ESS and again, there was no mention of a French-led nuclear deterrence or any significant shift in the reliance on NATO as a valued partner. The recommendations actually call for greater cooperation with NATO by saying,

The EU and NATO have worked well together on the ground in the Balkans and in Afghanistan, even if formal relations have not advanced. We need to strengthen this strategic partnership in service of our shared security interests, with better operational co-operation, in full respect of the decision-making autonomy of each organisation, and continued work on military capabilities.⁷⁷

The un-wavering bond between the Europeans and the Americans does not seem to be eroding and in the eyes of Europe, closer collaboration is required. This deeper relationship does erode France's request for a greater role within the EU. Paris also has no room to unilaterally grow within NATO's nuclear arm because most of the members within the European Union are also members of NATO.

To get a sense of what other European nations believe of France's nuclear policies and ambitions, Germany, United Kingdom, which is itself a nuclear nation, and Italy will be analyzed. There follows a brief history of each nation with regards to nuclear weapons, each nation's interaction with the United States, how each country reacts to France's aspirations to be a regional nuclear security provider, and whether each denies France the ability to provide regional deterrence. The preceding nations believe the United States should remain Europe's protector.

1. Germany

Germany's beliefs and the way in which it conducts itself in foreign affairs come about due to the climb of the Nazi party during the beginning of the twentieth century. Events like World War One, World War Two and the Holocaust have shaped how contemporary German affairs are handled. For much of the nuclear debate in Europe, Germany was occupied, divided and somewhat limited in its ability to reject outside

⁷⁷ European Union, *Report on the Implementation of the European Security Strategy*, Security Strategy, Brussels: European Union, 2008, 11.

actors ideas. The mentality of the German population is one of no war or aggressive posturing. With the history of Germany being so prevalent, the answer to France's cry for more relevance in a united nuclear Europe is no. Time is the first example of Germany's abstention from a French dominated nuclear deterrence.

After Germany surrendered on 07 May 1945, they were split up between the four major allies (U.S., USSR, UK and France). The state was divided between West Germany and East Germany.⁷⁸ It was not until October 3, 1990, when Germany unified, before that each German government had parental oversight by the United States (West Germany) and the Soviet Union (East Germany).⁷⁹ West Germany was very keen on maintaining the support from the United States specifically, because of its military strength compared to the other allies. The State Department states that U.S. German relations are, "a focal point of U.S. involvement in Europe since the end of World War II."⁸⁰ The tight relationship between the two nations is still strong and shows through nuclear affairs. A recurring theme in European affairs is the belief that nuclear weapons should never be used for any reason. An Angus Reid poll in 2007 asked several nations about the belief of the use of nuclear weapons. Germany was asked if they thought the use of nuclear weapons by NATO would be justified to which an astounding 76.9 percent would never believe the use is justified. The German government also spoke out against the French claims in 2007 when then President Sarkozy sprung a question on the German Chancellor, Angela Merkel. The German news agency Der Spiegel posted an article online where they describe the question posed by Sarkozy. In a meeting between the two leaders pertaining to nuclear issues (both nuclear energy and later nuclear weapons), Sarkozy shocked German leaders by asking if Germany would, "consider taking a

⁷⁸ English-Online, *Results and Aftermath of World War II*, n.d. <http://www.english-online.at/history/world-war-2/results-and-aftermath-of-world-war-ii.htm>, accessed January 26, 2013.

⁷⁹ timeanddate.com. *Day of German Unity in Germany*. n.d., accessed January 26, 2013 <http://www.timeanddate.com/holidays/germany/german-unity-day>.

⁸⁰ U.S. Department of State, *U.S. Relations With Germany*, October 02, 2012, <http://www.state.gov/r/pa/ei/bgn/3997.htm>.

political stake in the French atomic arsenal?"⁸¹ Both German leaders (Chancellor and Foreign Minister) were stunned and reaffirmed the stance of Germany and French nuclear assurances.⁸² While France has had no progress with Germany, Paris and London had nuclear ties in World War Two, but France squandered the opportunity.

2. Britain

The British Empire has been one of, if not the, dominate global powers for centuries. Only until fairly recently was this mindset altered. The prestigious Empire eventually hemorrhaged its colonies and had to regain its footing in the new world after World War II. Immediately after the war, the Allies, primarily the Big Three (the United States, the United Kingdom and the Soviet Union), set out to divide the spoils of war, which became heavily contested among the three nations. Although Britain was, on paper, a victor, it came with a price tag of the British Colonies and the British economy plummeting. What the British lost during the war was compensated by the trans-Atlantic bond with the United States, which translated to cooperation on multiple levels, to include nuclear weapons development.⁸³

Immediately following World War Two, the joint U.S. and UK nuclear development process began. The United Kingdom detonated its first nuclear weapon in 1952 and has maintained operational nuclear weapons from 1956 until the present. While the British shared a certain level of aggravation towards the Americans as the French in regards to broken promises and general rudeness, but Britain knew that the United States was the key to Britain's success. The UK relied heavily on the U.S. to manufacture delivery systems for British nuclear weapons, to include collaboration on the Royal Navy's ballistic missile submarines. With a current nuclear force of just over 200 nuclear

⁸¹ Ralf Beste and Stefan Simons, *Spiegel Online*, September 01, 2007, <http://www.spiegel.de/international/europe/thanks-but-no-thanks-sarko-s-nuke-offer-bombs-with-berlin-a-506124.html>.

⁸² Ibid.

⁸³ John Simpson and Jenny Nielsen, "The United Kingdom," In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 77–102 (New York: Oxford University Press, 2010); David Jarmul, *American History: The Rise of U.S. Influence After World War Two*, August 03, 2011, <http://learningenglish.voanews.com/content/american-history-the-rise-of-us-influence-after-world-war-two-126735008/116180.html>.

missiles, which are deployed via the British Vanguard Class submarines, the United Kingdom has the fifth largest nuclear stockpile. To complete the equation of British nuclear weapons, the British parliament has a robust nuclear policy in place. While there has been much criticism about nuclear weapons launch authority, the Prime Minister maintains the bulk of the decision to use such weapons. Even though the Prime Minister bears most of the burden, the UK has a similar use policy and contingency plans as the United States.

In broad strokes, nonetheless, the United Kingdom has the capacity for self-defense through nuclear deterrence. It is incapable and un-willing, conversely, of either protecting Europe or defending against an exponentially larger adversary such as the former Soviet Union by itself. As such, the United Kingdom will remain on the side of the United States; for overlapping reasons, it also will not support France as a provider of regional deterrence, although the joint French/British navy collaboration of 2010 does demonstrate some level of mutual support.⁸⁴

The vital trans-Atlantic relationship is perhaps the biggest factor in the United Kingdom's position on U.S.-led nuclear deterrence. The United Kingdom relied heavily on the United States from the beginning of its nuclear ambitions. The United States also helped Britain to develop its delivery systems for its warheads, and shared its own fissile material with London. Washington also provided assistance with Britain's nuclear missile submarines, and aided in the creation of a suitable framework for London's nuclear policy. The alliance between the two nations has been tested in such recent crises as Iraq, Afghanistan, Libya, and a genuine partnership dates all the way back to the early twentieth century. Moreover, the increased cooperation has affected British foreign policy by Britain adopting similar policy objectives as the Americans such as the United Kingdom's nuclear weapons use policy. The policy revolves around a strong defensive

⁸⁴ John Simpson and Jenny Nielsen, "The United Kingdom," In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 77–102 (New York: Oxford University Press, 2010).

posture for London's nuclear weapons and that their use would be as a measure of last resort to protect itself.⁸⁵

While the United States provided specific technological and administrative support, both states also enjoyed other mutual benefits. While London fielded its own nuclear capacity, the United States was able to store and deploy U.S. nuclear weapons in the United Kingdom to combat the Soviet threat. The UK also gained the ability to have a say in how U.S. nuclear weapons stationed in the UK were going to be used. By enabling the UK to have a say in employment of nuclear weapons, the United States helped to prop up the UK and make the British become more of a legitimate security provider, concomitantly increasing its legitimacy in nuclear deterrence.⁸⁶ The collaboration between Washington and London was in part because of France's own inanity.

France and the United Kingdom had a very different history compared to that of France and Germany. London and Paris began cooperating in issues related to nuclear weapons shortly after the start of World War Two. Through the Cold War, both nations attempted to intertwine their nuclear weapons and began a rollercoaster ride of failed attempts. By the end of the Cold War, France and Britain were again close to cooperation, but the fall of the Soviet Union and a financial crisis ended the venture. The contemporary history of the two nuclear nations continued after the Cold War, but London continues to uphold existing agreements that it has made to the other allies within NATO.

The first true cooperation attempt after the end of the Second World War to collaborate on nuclear weapons was during the 1960s. The British Prime Minister, Harold Macmillan, engaged in discussions with French President de Gaulle and proposed cooperation on nuclear issues. For Britain, this was an attempt to ease its way into the European Economic Community (EEC), but affirmed that nuclear issues would not be separated from a NATO context. President Charles de Gaulle would not engage in this

⁸⁵ Bruno Tertrais, *A Comparison Between U.S., UK and French Nuclear Policies and Doctrines*, Nuclear Policy (Paris: Centre National De La Recherche Scientifique, 2007).

⁸⁶ IBID., Bruno Tertrais, *A Comparison Between U.S., UK and French Nuclear Policies and Doctrines*, Nuclear Policy (Paris: Centre National De La Recherche Scientifique, 2007).

due to his belief of an independent nuclear force and controlling the central role for nuclear issues between the three allies. The 1970s brought another round of attempts to collaborate with France, now that de Gaulle was not in power. British Prime Minister, Edward Heath, brought France an identical proposal from the 1960s, but this time it was not de Gaulle who thwarted the conversation, it was the French being involved with their aspirations to get U.S. assistance with its own nuclear program. France at the time was not interested with Britain and talks halted. By 1985 London and Paris had no nuclear affiliation with each other. By the late 1980s talks resumed and both governments seemed keen on joint development projects, specifically, aviation launched nuclear missiles. The fall of the Soviet Union coupled with a financial crisis severed relations and each nation took its own path to recovery. The contemporary history of the two nuclear nations within Europe has been continually thwarted by current U.S./UK agreements and London's commitment to NATO.⁸⁷

While there may still be promising signs that the United Kingdom and France can cooperate in nuclear affairs, the current financial crisis (similar to that of the crisis after the Cold War) and increased tensions between Britain and France (due to provocative statements by Prime Minister Cameron) seem to push one to believe that Great Britain will continue to uphold commitments that have already been codified.⁸⁸ Individual nations are pursuing to push France away from a regional deterrence position, but international organizations also have gone to great lengths to curb French desires for regional deterrence.

This partnership also worries certain European Union (EU) members about Britain being insufficiently "European." The United Kingdom needs and will need United States to maintain its position in European defense. The stability of its own population,

⁸⁷ Bruno Tertrais, *Entente Nucleaire*, Options for UK-French Nuclear Cooperation (Washington, D.C.: BASIC Trident Commission, 2012).

⁸⁸ Ibid., James G. Neuger, *French-German Rejection Points to Cameron Isolation on EU*, January 23, 2013, <http://www.bloomberg.com/news/2013-01-23/germany-france-reject-cameron-cherry-picking-better-eu-deal.html>, accessed January 27, 2013.

nuclear weapons projects, and a healthy fear of protecting all of Europe with some help from the French, does not sit well with Britain.⁸⁹

3. Italy

Italy has been under the U.S. nuclear blanket since the end of World War II and has no intentions of throwing off these particular covers. After the war, like the rest of Europe, Italy was economically hurt by the war and needed the United States of America's help to get back on its feet along with the crippled Italian economy, the Italians were concerned over the growing threat of the Soviet Union. As with Britain and France, Italy accepted the stationing of American nuclear weapons on its soil for the ability to have some say in their use. Italy had little choice as quoted in an article by Leopoldo Nuti, in which he said,

Italian diplomacy had few cards to play. The European scenario after World War II was likely to be dominated by two powers, France and Britain, which certainly would not soon forget the 'stab in the back' of 1940; Germany was likely to remain in a weakened condition... some Italian diplomats considered a flirtation with the USSR to exert pressure on the western allies... That left the United States as the only lever available to Italian diplomacy to regain some of its previous standing.⁹⁰

The issue of nuclear weapons has not been an issue in Italy until just a few years ago, correlating to the signing of the Non-Proliferation Treaty, which became effective in March of 1970.⁹¹

Current Italian concerns for nuclear weapons focus on disarmament throughout the world. The short answer to the original question of whether or not Italy would want Paris providing regional deterrence is "No." Italy would rather eradicate nuclear weapons

⁸⁹ John Macgregor, "Britain and Europe." In *Proceedings of the Academy of Political Science* Vol. 29, No. 2, The "Atlantic Community" Reappraised, by The Academy of Political Science, 36–48 (The Academy of Political Science, 1968).

⁹⁰ Leopoldo Nuti, "The Richest and Farthest Master is Always Best: U.S.-Italian Relations in Historical Perspective," In *The Atlantic Alliance Under Stress*, by David M. Andrews, 177–198 (New York: Cambridge University Press, 2005), 178.

⁹¹ IBID., Laura Spagnuolo, "British American Security Information Council," *Italy's Tactical Nuclear Weapons*, May 2011, http://www.basicint.org/sites/default/files/italys_tactical_nuclear_weapons_0.pdf.

as a whole. While Italy still believes in the extinction of nuclear weapons, Italians also understand their vital importance to regional stability in Europe. Stefano Silvestri, Former Under Secretary of State for Defense and current President of the International Affairs Institute, had this to say regarding Italy's current position: "[T]he American nuclear guarantee is still important to European security, and the nuclear element is at its core. Italian authorities fear that by removing [the nuclear element]... this guarantee may somehow be weakened." Silvestri furthers his discussion about the guarantee becoming weak by stating it "would risk the credibility of the Alliance's collective defense system."⁹² With the Italian government in agreement that the need to continued nuclear presence in Europe is vital, but the Italian citizens do not share that opinion.⁹³ Based on a poll in 2007, the question was asked of Italian citizens whether the use of nuclear weapons by NATO, in which the United States is the largest contributor, would be justified. Italy had shown that only 18 percent believed nuclear weapons should be used for deterrence purposes only and an astonishing 69.9 percent believed the use of nuclear weapons are never justified.

The clear objection to nuclear weapons gave way to a protest in 2007, when an estimated 100,000 people crowded the Italian streets to pressure the Italian government. While this display of public disgust has made the Italian government uneasy, it will not change the current policy of relying on the United States (through NATO) to provide deterrence until the world can universally disarm. For Italy, there would be too much at stake to move under a French nuclear umbrella, which would make the situation in Europe more volatile and may increase tensions during a critical phase in non-proliferation.⁹⁴

⁹² Laura Spagnuolo, "British American Security Information Council," *Italy's Tactical Nuclear Weapons*, May 2011, http://www.basicint.org/sites/default/files/italys_tactical_nuclear_weapons_0.pdf.

⁹³ IBID.

⁹⁴ Paul Ingram and Claudine Lamond, *Politics Around U.S. Tactical Nuclear Weapons in European Host States*, Tactical Nuclear Weapons, (BASIC, 2009).

C. CONCLUSIONS

For France, the clear role of being a regional deterrent for Europe has been constant since the very infancy of French nuclear weapons. Prominent figures in Paris from Charles de Gaulle to the current head of state, President Hollande all draw specific links between Paris and the rest of Europe in regards to regional security involving nuclear weapons. Just as French officials have announced their desire to provide deterrence for Europe, the Europeans have denied or abstained from the notion of a French deterrence for the continent. Specific members including Germany and Britain have been nervous over the claims of France. These claims also create instability in other regional powers, such as Russia. The unwillingness to accept France's proposal clearly shows how Europe perceives France's role in nuclear deterrence.

France wanted to play a larger role in the decisions to be made with the European defense, but with the Anglo-Saxons being considered the main players; France was forced into a smaller role. As NATO matured, the notion of the Americans remaining a central portion of the European defense plan and the only nation who continued to argue against a closer cohabitation was the French. With the multiple attempts to insert dialogue about a French-led nuclear deterrence into the European Union discussions, the other European nations continue to divert the conversation and even today, the European nuclear arm has not been discussed in depth.

While talks of defense cooperation and collaboration have always been present in the EU, the first real attempt to develop a combined security strategy succeeded in 2000 with the formation of the European Security and Defense Policy and in 2003 with the European Security Strategy. European leaders established the ESDP to attempt to use a combined European military/defense arm. Europe also published the ESS to establish a combined list of potential threats and how to combat them, but never delineated specific forces to combat such threats. Neither of these documents discusses nuclear issues even though France continues to push a European nuclear agenda.⁹⁵

⁹⁵ European Union, *A Secure Europe in a Better World*. European Security Strategy, Brussels: European Union, 2003.

IV. FURTHER COMPLICATIONS: TIMES ARE TOUGH FOR PARIS

The United States of America has proven for the last 6 decades that it can protect Europe from nuclear war. The amount of resources and open space allows the U.S. the ability to sustain a large nuclear arsenal. Tough financial times however, have created a global situation where stricter rules govern against out of control spending and a mentality of austerity. Without debating the exact cause of timeframe of the most recent financial crisis, the fact is that many European and others have been seeing a downward trend of revenue. When money is entering the nation in smaller quantities, the concept of needs and wants becomes harder to manage. Nuclear weapons are particularly difficult to classify as a need or a want when it comes to France (and any other nuclear nation under the NATO umbrella), the choices are to maintain an expensive, independent nuclear program or dismantle the Force de Frappe and use the existing nuclear umbrella provided mainly by the Americans. France has made it quite clear that its intention is to continue spending large sums of money on developing and modernizing its nuclear force.

A. MONEY MATTERS

In a report by Bruno Tertrais, a Senior Research Fellow for the Foundation for Strategic Research, he looks at the nuclear situation for France in 2030. Tertrais points out many important factors that lead France to continue its nuclear funding; factors which all stem from the unchanged nuclear environment. Some potential scenarios include conflicts with Russia, North Korea and state sponsored terrorism. While Tertrais points out three possible scenarios for 2030 (ranging from doubling the number of nuclear nations to ending the use of all nuclear weapons), the two that will drive France to maintain nuclear spending for the foreseeable future will always outweigh the third. Because of the realistic approach when dealing with nuclear weapons, nations will always plan for the worst and hope for the best. With a somewhat clear motive behind France's spending on nuclear weapons going down and the continued urge to pursue a larger deterrent role, Paris cannot supply Europe with a credible deterrence as the Americans can.

With the apparent willingness to use nuclear weapons if Paris felt threatened, the issue then becomes whether France can afford the current nuclear force and if President Holland can expand the *Force de Frappe* to provide deterrence for the continent. In a report from Global Zero, France spends \$61 billion on defense and \$10.7 billion of the defense budget is allocated for nuclear weapons. In 2011, nuclear budget increased by \$2.7 billion even though the economic crisis has engulfed Europe for several years. For the claims of French officials to be reinforced by a reliable infrastructure, Paris would have to increase its defense budget to a level that is sufficient to maintain the same level of security in Europe as the Americans provide through NATO. The United States currently allocates \$708 billion to NATO's defense budget, which is just over 4.7 percent of the total defense budget. France provides just \$52 billion, which represents just 2 percent of the total defense budget. The 2010 NATO defense budget review also shows that France contributed less in 2011 than in 2010, which differs from the United States, which increased its contributions by nearly \$70 billion. While most will argue that the United States does not use the entire budget for nuclear weapons, it does show the large gap between the U.S. and French contributions and the need for France to invest more into defense to attempt to provide a credible deterrent.⁹⁶

B. NUCLEAR DECISIONS

The ultimate aim of French strategy is to keep France at the heart of European security and defense. But while France may want to provide nuclear guarantees to the region, France does not have the material or finances to play this role in the region and furthermore, Europe does not want such a guarantee from France alone. For France, there are three critical items that must be addressed in order to improve the national deterrence and create a stable regional deterrence: 1) restarting production of fissile material; 2) improving or purchasing new delivery systems; and restructuring nuclear use/deterrence

⁹⁶ Bruce G. Blair and Matthew A. Brown, *World Spending on Nuclear Weapons Surpasses \$1 trillion Per Decade*, 2011, <http://www.globalzero.org/files/scott/Global%20Zero%20Cost%20Study.%20June%202011.pdf>; Atlantic Council, *NATO's Defense Budgets 2011*, November 19, 2010, http://www.aofs.org/wp-content/uploads/2010/11/111910_ACUS_Kordosova_NATOBudget.pdf.

policy. In all three cases, the evidence suggests that France could not fill the role that the United States currently plays in European nuclear security and defense.

1. Fissile Material

Beginning in 1992, France started dismantling its fissile material production capabilities in accordance with the Fissile Material Cut-Off Treaty (FMCT), which set out to become a stepping stone to universal disarmament. France had two fissile material production facilities for nuclear weapons, one in Pierrelatte and the other in Marcoule. The Pierrelatte facility was responsible for producing highly enriched uranium (HEU), an element primarily used for nuclear armaments, for France from 1979 until 1996. In the facility's seventeen years of operation, it was able to produce roughly 70,000 pounds of HEU, which equates to just over eleven pounds per day. According to the International Atomic Energy Agency (IAEA), it takes approximately twenty-five kilograms (55.12 pounds) to create a nuclear weapon with a similar yield of the weapons used on Hiroshima and Nagasaki in World War II.⁹⁷

With facilities already inside of France, it would seem plausible that Paris would be able to re-generate fissile material production and create a significant nuclear weapon every five days and five to six warheads every month. With just one facility, France would be able to stockpile the same number of U.S. nuclear weapons stockpiled in Europe in just over three years. The challenges contained in a potential re-generation of French fissile material production are two-fold. With the current economic crisis and enormous operating/production cost of fissile material would surely bring France to its knees.

Using Pierrelatte as a template and a goal of matching the American arsenal in three years, France would need roughly one more facility comparable to Pierrelatte to enrich the Uranium needed to produce enough fissile material in three years, with the added redundancy built into the production infrastructure. The idea of creating one more

⁹⁷ International Panel on Fissile Materials, France. n.d.
<http://fissilematerials.org/countries/france.html>, accessed May 13, 2012.

facility would simply not be entertained at any level of French government and certainly not within France's citizens and taxpayers.

2. Delivery Systems

France has maintained multiple delivery systems for its nuclear arsenal. As of 2008, France maintains some sixty aircraft and four submarines. Operating cost for these assets are becoming ever greater and with the solution of the current economic crisis getting ever farther away, France finds it difficult to maintain the existing French nuclear fleet, never the less fund additional units for regional defense. The U.S. operates more than ten ballistic missile submarines, hundreds of land-based missiles, and numerous air force bombers. The United States also still maintains forward deployed units to respond to any threat within minutes.

The only way for France to rival the Americans would be to dedicate more of the French gross domestic product (GDP) to defense spending. As of 2010, France provides just over 39,000 Euros (roughly \$52,000 using 2010 average exchange rate) to NATO's defense budget, compared to the United States average of \$785,000. While every penny does not go into the nuclear portion of the American nuclear arsenal, nuclear weapons are not the only arm in nuclear deterrence. U.S. military forces contribute a legitimate piece to deterrence, which is something France cannot support. France would run into a similar problem as in the previous section in the fact that France would have to build more military infrastructure to build enough forces to rival Washington and potentially lure European nations to turn toward France for security and deterrence. France would thus have to increase its share by 1500 percent of its current share. While Europe may have the infrastructure to increase and modernize French nuclear delivery vehicles, France itself does not, and would therefore be reliant on other nations to aid in France's ability to provide enough delivery systems for regional defense, where the United States has the infrastructure to support the mission of extended deterrence.⁹⁸

⁹⁸ North American Treaty Organization, Financial and Economic Data Relating to NATO Defence, Economic (NATO, 2011).

3. Policy

The last area in which the French government would need to re-structure would be its nuclear policy. As it stands, the French nuclear policy is aggressive compared to other allied nuclear nations. While this stance does provide a certain level of credibility, it also generates a certain level of instability and un-easiness within Europe. Most European nations prefer the United States nuclear policy because it is not too provocative. It relies on the American numerical and technological strength to back up the policy of a last resort use. While the previous statement would suggest that the United States may never actually use nuclear weapons (which is made clear earlier in the piece with regards to France becoming a nuclear nation), the United States also, on paper, makes it clear that they will not hesitate to use such weapons if deemed necessary.

France on the other hand maintains, in simple terms, a first use policy. If France deems that its vital interests are at risk, it will not hesitate to use nuclear weapons. While this policy has not been challenged by anyone, it also does not definitively tell us whether France will actually use nuclear weapons in this context. On words alone, however, the French may seem more prone to use nuclear weapons, which may start a potential chain reaction that could lead to the destruction of the Earth. For France to gain the trust of its European allies, it would have to alter its nuclear use strategy to a more defensive stance as opposed to an aggressive/offensive strategy.

Understandably, there would be trade-offs to the change in strategy, but a new, more relaxed strategy would be more enticing to regional partners. France cannot change its nuclear policy because it does not have a large enough force to deter larger potential rivals, such as Russia or China. France would not have enough of an arsenal to deliver enough damage to stop any outside aggression and would likely be destroyed where larger nations may be able to survive the entire French arsenal.⁹⁹

⁹⁹ Ploughares Fund, World Nuclear Stockpile Report, May 12, 2012, <http://www.ploughshares.org/world-nuclear-stockpile-report>; Bruno Tertrais, *A Comparison Between U.S., UK and French Nuclear Policies and Doctrines*, Nuclear Policy (Paris: Centre National De La Recherche Scientifique, 2007); Bruno Tertrais, "France," In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 103–127 (New York: Oxford University Press, 2010).

France could never provide a credible deterrent to the European community. There is just not enough evidence and too many unknowns for European nations to favor France over the United States with regards to nuclear security. Instead, France should maintain its position in the nuclear community and supplement regional security to Europe through NATO and other international organizations.

Perhaps the largest reason as to why France would not take the nuclear deterrence mission away from Washington would be European politics and culture. The dynamic differences between the European governments and European citizens become quite apparent in past and present literature. The European Security Strategy ratified in 2003 outlines the two biggest concepts for Europe, multilateralism and soft power. Multilateralism is a concept where the EU makes decisions as a whole and does not work through unilateral means. Soft power tactics rely on using all diplomatic means (treaties, sanctions, etc.) before considering military actions. These two principles hold the key to European society with regards to security. European nations are generally against military actions and do not appreciate unilateral action. The reason for the citizens of Europe's dislike for war and military actions lies in Europe's history. With the vast technological differences between the United States nuclear force and the force de frappe, there may not be the critical factor in the other European nation's willingness to use France as their nuclear deterrence.¹⁰⁰

¹⁰⁰ European Union, *A Secure Europe in a Better World*, European Security Strategy, Brussels: European Union, 2003; European Union, *Report on the Implementation of the European Security Strategy*, Security Strategy, Brussels: European Union, 2008.

V. CONCLUSIONS: RETHINKING THE FRENCH ROLE

For decades, France has laid claims to provide regional nuclear deterrence. Paris unfortunately must change numerous pieces of its nuclear infrastructure to better promote its capability to protect other nations. France has built an extensive national nuclear deterrent force which is one of the most technologically advanced throughout the nuclear world. Its nuclear policy shows strong signs of credibility including some built in redundancies (nuclear dyad and a theoretical redundant chain of command). For more than 50 years France has geared its nuclear program for the purposes of national defense, even though prominent members in the French government preach for an expanded role. Surrounding nations believe France should give up its aspirations and strengthen existing institutions to better protect the continent. Intergovernmental organizations (NATO specifically) also want France to integrate into the larger nuclear infrastructure, which would strengthen the overall institution. With nuclear weapons being such a delicate topic, the implications of sending multiple signals about the strength and unification can be great, with the potential for war present.

The way ahead for France becomes somewhat simple to justify because of the evidence that suggests Paris should bring itself into NATO's nuclear structure, which will raise France's prestige and ultimately give Paris a larger say on the continent in regards to nuclear security. The real question may have different answers for different entities, but the decision can only be made by Paris.

A. THE NATO FACTOR

With France re-joining NATO's integrated military structure, NATO allies have called for France to enrich NATO's capabilities and to supplement its strength in all areas of the alliance, to include nuclear deterrence. NATO's 2010 Strategic Concepts display the position of the international organization. The Strategic Concept notes,

“The supreme guarantee of the security of the Allies is provided by the strategic nuclear forces of the Alliance, particularly those of the United States; the independent strategic 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.”¹⁰¹

The importance of the three nuclear nations within NATO was not limited to 2010, but even in 1991. Even though France was not re-integrated into the military structure, its nuclear force was labeled as playing an essential role within the Alliance. The exact same language used in 2010 was used in 1991. NATO has also noted at the Lisbon Summit in May 2012 that France, UK and the United States each has a right to use nuclear weapons independently (i.e., self-defense), but must do so with strict limitations. While France believes in a regional deterrent role within Europe through its own national nuclear force, they are already providing a vital role in deterrence in the eyes of NATO. With NATO and Paris having different opinions about France’s role in nuclear deterrence, there is a perceived sense of weakness to the Alliance that may erode the credibility of the nuclear deterrence for Europe.

The discord present between NATO and France may have negative outcomes in the eyes of the international community. Much like a board meeting in a large company, if each member has his or her own projected path of the company, the company would not be taken seriously in the business arena. Even without France’s contribution to nuclear deterrence, NATO does provide a high level of credibility; however, France can lower the level of credibility by not speaking with a single voice in harmony with NATO, EU and individual European nations.

Many aggressor nations in the world today use realistic tactics in regards to political issues. The issues brought up by these nations become more complicated when nuclear weapons are involved. States like North Korea strive to achieve nuclear weapons to gain leverage over neighboring states and regional hegemons. In regards to nuclear weapons, John Mearsheimer notes,

Non-nuclear rivals are sure to go to great lengths to acquire nuclear arsenals of their own, and once they do, it would be difficult, although not

¹⁰¹ NATO, *Strategic Concepts*, November 2010, http://www.nato.int/cps/en/natolive/topics_56626.htm?selectedLocale=en, accessed March 21, 2012.

impossible, for a great power to reestablish superiority by insulating itself from nuclear attack.¹⁰²

While the belief of this international relations framework is that nuclear weapons are the sole answer to gain a great power status, it does note that gaining that status is much harder when other nations have nuclear weapons and may have more of an impact in an area that only has one nuclear nation. The argument can thus be made that the more states that possess nuclear weapons, the less stable the world is. By nuclear nations banding together, they can reduce the amount of nuclear entities in the world and gain leverage throughout the globe. By France promoting a separate goal than its allies (EU and NATO), it creates an avenue where other nations can rise to the nuclear age. What France should consider is an embrace of France's role within NATO. By acceptance of the role NATO provides for France, it will regain an important role in global affairs.

B. TWENTY-FIRST CENTURY GRANDEUR

There are many areas where France can regain its preeminence and be seen as a world leader. France's leading role in Mali—though decidedly not a nuclearized conflict—shows both the old aspiration to have a prominent role in world affairs and the increasingly familiar alliance orientation of French engagements.

One area that Paris can use to improve its position in European nuclear affairs is to embrace the role that NATO has provided itself. By unifying NATO's voice, France can strengthen NATO's nuclear deterrence and make other aggressors think further about testing NATO's resolve. While nuclear deterrence through offensive means is important, defensive capabilities have also been recently highlighted as an important focal point for NATO. The current EPAA (European Phased Adaptive Approach) is a U.S. led initiative to protect Europe from Intermediate Range Ballistic Missiles (IRBM) from Iran and North Korea.¹⁰³ While a soft plan is in place, to be completed in 2020, there is still potential for France to cooperate and play a large role in European nuclear defense. One

¹⁰² John Mearsheimer, *Tragedy of Great Power Politics* (New York : W. W. Norton & Company, 2001), 130.

¹⁰³ Jeffrey Mankoff, "The politics of U.S. missile defence cooperation with Europe and Russia." *International Affairs* 88, 2012: 329–347.

other way in which France can improve its standing in Europe and NATO is to re-integrate back into NATO's Nuclear Planning Group (NPG). The NPG addresses nuclear matters and policy within the Alliance. France is the only member of NATO who does not participate and leave France in a bad position where it cannot influence any nuclear decision for NATO.¹⁰⁴ Any of the previous avenues will bring France closer to the nuclear table within NATO and improve its credibility within Europe.

What France cannot do is continue down a path where neither NATO nor the EU will support an independent nuclear armed France. If European history has taught the world one thing in regards to the French extended deterrence, it's that Paris is being offered an opportunity to influence NATO's nuclear decisions in Europe and the rest of Europe does not want France to take over extended deterrence from the Americans. France for the last few centuries has been trying to regain its position within Europe and the world, but an autonomous nuclear force is not the avenue to travel. The avenue to pursue is one where the United States and France works closer together and cooperates through the existing NATO's nuclear framework. Close cooperation may ease fiscal concerns and improve political standing with both NATO and the EU (and the nations involved in each institution). France is already an important player in regional nuclear deterrence for Europe, it just needs to embrace NATO and the prestige will follow.

¹⁰⁴ NATO, *The Nuclear Planning Group*, September 05, 2012, http://www.nato.int/cps/en/natolive/topics_50069.htm.

LIST OF REFERENCES

- Agency, Central Intelligence. Current Intelligence Weekly Summary 18 September 1958. Intelligence, Washington, D.C.: CIA, 1958.
- Assembly, The National. Cositution of October 4, 1958. 2012. Accessed October 16, 2012. <http://www.assemblee-nationale.fr/english/8ab.asp#II>.
- Encyclopedia Astronautica. "SSBS." n.d. Accessed November 20, 2012. <http://www.astronautix.com/lvs/ssbs.htm#more>.
- BBC. Anti-nuclear protests in Germany and France. April 2011. Accessed September 05, 2012. <http://www.bbc.co.uk/news/world-europe-13188507>.
- Berthon, Simon. The Allies at War. February 17, 2011. Accessed October 18, 2012. http://www.bbc.co.uk/history/worldwars/wwtwo/allies_at_war_01.shtml.
- Biography.com. Napoleon.biography. 2012. Accessed August 20, 2012. <http://www.biography.com/people/napoleon-9420291?page=1>.
- Boese, Wade. France Upgrades, Trims Nuclear Arsenal. 2008. Accessed August 01, 2012. http://www.armscontrol.org/act/2008_04/France.
- Born, Hans. "National Governance of Nuclear Weapons: Opportunities and Constraints." Geneva Centre for the Democratic Control of Armed Forces, 2007: 1–17.
- Brown, Bruce G. Blair and Matthew A. World spending on nuclear weapons surpasses \$1 trillion per decade. 2011. Accessed December 21, 2012. <http://www.globalzero.org/files/scott/Global%20Zero%20Cost%20Study,%20June%202011.pdf>.
- Burleigh, Michael. *Earthly Powers*. Great Britain: HarperCollins, 2005.
- Burn-Murdoch, Simon Rogers, and John. Eurozone Debt Crisis. August 02, 2012. Accessed August 11, 2012. <http://www.guardian.co.uk/news/datablog/2011/nov/07/euro-debt-crisis-data>.
- Chirac, Jacques. *Speech given to the Airforce and strategic ocean*. Brest, 2006.
- Colon, R. The Jet Age. n.d. Accessed January 08, 2013. http://www.century-of-flight.net/Aviation%20history/jet%20age/france_nuclear.htm.
- Conference, NPT 2010 Review. France TNP. 2010. Accessed May 13, 2012. <http://www.francetnp2010.fr/spip.php?article92>.

- Council, Atlantic. NATO's defense budgets 2011. November 19, 2010. Accessed December 21, 2012. http://www.aofs.org/wp-content/uploads/2010/11/111910_ACUS_Kordosova_NATOBudget.pdf.
- D.C., French Embassy in Washington. Reform of French National Defense. March 20, 2008. Accessed August 07, 2012. <http://ambafrance-us.org/spip.php?article566>.
- "The Dassault Rafale had already reached development by the time Dassault Mirage 2000 reached operational status." Military Factory.com. September 23, 2012. Accessed January 08, 2013. http://www.militaryfactory.com/aircraft/detail.asp?aircraft_id=60.
- Darnis, Jean-Pierre. Francois Hollande's Presidency: A New Era in French Foreign Policy. Foreign Policy, Paris: Instituto Affari Internazionali, 2012.
- Davenport, Kelsey. Fact Sheet: U.S. Nuclear Modernization Programs. March 22, 2012. Accessed August 01, 2012. <http://www.armscontrol.org/factsheets/USNuclearModernization>.
- Dugdale-Pointon, T. (23 March 2001), *Battle of Leipzig ('The Battle of Nations'), 16–18 October 1813*. Accessed February 09, 2013. http://www.historyofwar.org/articles/battles_leipzig.html.
- Edmond. NATO's Incredible Nuclear Strategy: Why U.S. Weap Europe Deter No One. November 2011. Accessed August 21, 2012. http://www.armscontrol.org/act/2011_11/NATO_Incredible_Nuclear_Strategy_Why_U.S._Weapons_in_Europe_Deter_No_One.
- English-Online. *Results and Aftermath of World War II*. n.d. Accessed January 26, 2013. <http://www.english-online.at/history/world-war-2/results-and-aftermath-of-world-war-ii.htm>.
- Ek, Carl. *NATO Common Funds Burdensharing: Background and Current Issues*. Economic, Washington, D.C.: Congressional Research Service, 2010.
- Flaherty, Ted. Current World Nuclear Arsenals. January 02, 1997. Accessed March 11, 2012. <http://www.cdi.org/nuclear/database/nukestab.html>.
- France, Bonjour La. France History- Charles de Gaulle. 1998. Accessed October 05, 2012. <http://www.bonjourlafrance.com/france-history/charles-de-gaulle.htm#1969>.
- .France History- Time line of French History. 2012. Accessed August 22, 2012. <http://www.bonjourlafrance.com/france-history/timeline-of-french-history.htm>.
- France's Nuclear Weapons: Origin of the Force de Frappe. May 01, 2001. Accessed March 12, 2012. <http://nuclearweaponarchive.org/France/FranceOrigin.html>.

- France's Nuclear Weapons: Origin of the Force de Frappe. December 24, 2001. Accessed May 07, 2012. <http://nuclearweaponarchive.org/France/FranceOrigin.html>.
- Freedman, Lawrence. *The Evolution of Nuclear Strategy*. New York: St Martin's Press LLC, 2003.
- French Colonial Empires. n.d. Accessed October 10, 2012. <http://www.thelatinlibrary.com/imperialism/notes/frenchempire.html>.
- Fund, Ploughares. World Nuclear Stockpile Report. May 12, 2012. Accessed May 08, 2012. <http://www.ploughshares.org/world-nuclear-stockpile-report>.
- Gaba, Eric. Nuclear plants in France. 2012. Accessed November 19, 2012. <http://www.mapsorama.com/nuclear-plants-in-france/>.
- Gavin, Francis J. "Same as it Ever Was." *International Security*, 2009: 7–37.
- Golan-Vilella, Robert. UK, France Sign Nuclear Collaboration Treaty. December 2010. Accessed August 21, 2012. http://www.armscontrol.org/act/2010_12/UK_France.
- Gregory, Shaun. Defense Policy Planning and Review in France. September 1998. Accessed August 25, 2012. <http://www.acronym.org.uk/dd/dd29/29french.htm>.
- Harkabi, Yehoshafat. *Nuclear War and Nuclear Peace*. New Brunswick: Transaction Publishers, 2008.
- . *Nuclear War and Nuclear Peace*. Washington, D.C.: Library of Congress, 2008.
- Hartley, Anthony. "Gaullism: The Rise and Fall of a Political Movement." *Outerbridge and Dienstfrey*, 1971: 329–331.
- Hecht, Gabrielle. *The Radiance of France*. Boston: Massachusetts Institute of Technology, 1998.
- Hu, John C. Hopkins and Weixing. *Strategic Views from the Second Tier*. New Brunswick: Transaction Publishers, 1995.
- Ingram, Claudine Lamond and Paul. *Politics around U.S. tactical nuclear weapons in European host states*. Tactical Nuclear Weapons, BASIC, 2009.
- Ingram, Oliver Meier and Paul. The NATO Summit: Recasting the Debate Over U.S. Weapons in Europe. 2012. Accessed August 21, 2012. http://www.armscontrol.org/act/2012_05/The_NATO_Summit_Recasting_the_Debate_Over_U.S._Nuclear_Weapons_in_Europe.

- Jarmul, David. American History: The Rise of U.S. Influence After World War Two. August 03, 2011. Accessed May 07, 2012. <http://learningenglish.voanews.com/content/american-history-the-rise-of-us-influence-after-world-war-two-126735008/116180.html>.
- Jordan, Robert S. *NORSTAD COLD WAR NATO SUPREME COMMANDER Airman, Strategist, Diplomat*. New York: ST. Martin's Press, Inc., 2000.
- . *Norstad: Cold War NATO Supreme Commander*. New York: St. Martin's Press, INC., 2000.
- Kingston. Nuclear weapons: The modernization myth. December 08, 2009. Accessed August 01, 2012. <http://www.thebulletin.org/web-edition/features/nuclear-weapons-the-modernization-myth>.
- Kohl, Wilfred L. *French Nuclear Diplomacy*. Princeton: Princeton University Press, 1971.
- Liberation. *Concerted deterrence: Germany reluctant*. September 09, 1995. Accessed January 17, 2013. <http://translate.google.com/translate?hl=en&sl=fr&u=http://www.liberation.fr/france/0101153758-dissuasion-concertee-l-allemande-reticente&prev=/search%3Fq%3D1995%2Bdissuasion%2Bconcertee%26hl%3Den%26tbo%3Dd%26biw%3D763%26bih%3D492&sa=X&ei=Whv4UKunMifxiwKD>.
- L'Inflexible class. 2013. Accessed December 20, 2012. http://www.military-today.com/navy/linflexible_class.htm.
- Lounge, Entrepreneur's. Type A Personality & Traits vs Type B Personality. n.d. Accessed October 06, 2012. <http://entrepreneurlounge.org/type-a-personality-traits-vs-type-b-personality/>.
- Macgregor, John. "Britain and Europe." In *Proceedings of the Academy of Political Science* Vol. 29, No. 2, The "Atlantic Community" Reappraised, by The Academy of Political Science, 36–48. The Academy of Political Science, 1968.
- Mankoff, Jeffrey. "The politics of U.S. missile defence cooperation with Europe and Russia." *International Affairs* 88, 2012: 329–347.
- Materials, International Panel on Fissile. Countries: France. n.d. Accessed May 13, 2012. <http://fissilematerials.org/countries/france.html>.
- . France. n.d. Accessed May 13, 2012. <http://fissilematerials.org/countries/france.html>.

- Mearsheimer, John. *Tragedy of Great Power Politics*. New York : W. W. Norton & Company, Inc., 2001.
- Menon, Anand. *France, NATO and the Limits of Independence 1981–97*. London: Antony Rowe Ltd, Chppenham, Wiltshire, 2000.
- Monitor, Angus Reid Global. Angus Reid Public Opinion . September 18, 2007. Accessed August 01, 2012. http://www.angus-reid.com/polls/27829/global_poll_finds_varied_views_on_nuclear_weapons/.
- Naim, Moises. Foreign Affairs. May/June 2012. Accessed August 01, 2012. http://relooney.fatcow.com/0_New_14032.pdf.
- Napoleonic Guide. 1999. Accessed October 02, 2012. <http://www.napoleonguide.com/campind.htm>.
- Nations, Encyclopedia of the. *Mali-History*. 2013. Accessed February 10, 2013. <http://www.nationsencyclopedia.com/Africa/Mali-HISTORY.html>.
- Nations, United. *Dag Hammarskjold*. February 07, 2013. Accessed February 07, 2013. <http://www.un.org/depts/dhl/dag/time1956.htm>.
- Nations, United. *Non-proliferation of Nuclear Weapons (NPT)*. Nuclear Treaty, New York: United Nations, 2010.
- . Non-Proliferation of Nuclear Weapons. May 3, 2010. Accessed July 07, 2012. <http://www.un.org/en/conf/npt/2010/background.shtml>.
- NATO. Deterrence and Defense Posture Review. May 20, 2012. Accessed August 21, 2012. http://www.nato.int/cps/en/natolive/official_texts_87597.htm?mode=pressrelease.
- NATO. *Financial and Economic Data Relating to NATO Defense*. Finance, Bruxelles: NATO Press , 2011.
- . Strategic Concepts. November 2010. Accessed March 21, 2012. http://www.nato.int/cps/en/natolive/topics_56626.htm?selectedLocale=en.
- . The NATO Defense Planning Process. 2012. Accessed August 25, 2012. http://www.nato.int/cps/en/natolive/topics_49202.htm?selectedLocale=en.
- NATO. *The Nuclear Planning Group*. September 05, 2012. Accessed February 05, 2013. http://www.nato.int/cps/en/natolive/topics_50069.htm.
- Neuger, James G. *French-German Rejection Points to Cameron Isolation on EU*. January 23, 2013. Accessed January 27, 2013. <http://www.bloomberg.com/news/2013-01-23/germany-france-reject-cameron-cherry-picking-better-eu-deal.html>.

- Neumann, Robert G. "Formation and Transformation of Gaullism in France." *The Western Political Quarterly*, Vol. 6, No. 2, 1953: 250–274.
- Nielsen, John Simpson and Jenny. "*The United Kingdom.*" In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 77–102. New York: Oxford University Press, 2010.
- Nuclear Weapons. July 24, 2011. Accessed December 21, 2012. <http://www.globalsecurity.org/wmd/world/france/nuke.htm>.
- Nuti, Leopoldo. "*The Richest and Farthest Master is Always Best: U.S.-Italian Relations in Historical Perspective.*" In *The Atlantic Alliance Under Stress*, by David M. Andrews, 177–198. New York: Cambridge University Press, 2005.
- Obama, Barack. *National Security Strategy*. Security Strategy, Washington, D.C.: United States Government, 2010.
- Observateur, Le nouvel. TRIBUNE. Holland: "Nuclear Deterrence: I will maintain." December 20, 2011. Accessed July 18, 2012. http://translate.googleusercontent.com/translate_c?hl=en&prev=/search%3Fq%3D%2522Dissuasion%2Bnucl%25C3%25A9aire%2B:%2Bje%2Bmaintiendrai%2522,%2Bpar%2BFran%25C3%25A7ois%2BHollande%26hl%3Den%26lr%3Dlang_en%26sa%3DX%26biw%3D1440%26bih%3D796%26tbs%3Dlr:lang_.
- Organization, North American Treaty. *Financial and Economic Data Relating to NATO Defence*. Economic , NATO, 2011.
- Podvig, Pavel. *Russia's Nuclear Forces: Between Disarmament and Modernization*. *Nuclear Forces*, Security Studies Center, 2011.
- The Poll Archive*. September 18, 2007. Accessed March 19, 2012. http://www.angus-reid.com/polls/27829/global_poll_finds_varied_views_on_nuclear_weapons/.
- Republique, Presidence De La. *The French White Paper on Defense and National Security*. National Security, Paris: French Republic, 2008.
- Sarkozy, Nicolas. "Presentation of Le Terrible in Cherbourg." Cherbourg, March 21, 2008.
- Schwartz, Stephen I. Brookings. May 07, 2012. Accessed May 07, 2012. http://www.brookings.edu/projects/archive/nucweapons/box2_1.aspx.
- Service, Congressional Research. *NATO Common Funds Burdensharing: Background and Current Issues*. Funding, Washington: CRS, 2010.

- Simons, Ralf Beste and Stefan. *Spiegel Online*. Spetember 01, 2007. Accessed January 26, 2013. <http://www.spiegel.de/international/europe/thanks-but-no-thanks-sarko-s-nuke-offer-bombs-with-berlin-a-506124.html>.
- Spagnuolo, Laura. *Italy's Tactical Nuclear Weapons*. Tactical Nuclear Weapons, London: British American Security Information Council, 2011.
- State, U.S. Department of. *U.S. Relations With Germany*. October 02, 2012. Accessed January 26, 2013. <http://www.state.gov/r/pa/ei/bgn/3997.htm>.
- Techau, Jan. Forget CSDP, It's Time for Plan B. August 26, 2011. Accessed September 06, 2012. <http://carnegieendowment.org/2011/08/26/forget-csdp-it-s-time-for-plan-b/5zr8>.
- Terpan, Fabien. *The Europeanization of the French Defence Policy*. defense policy, Riga: University of Latvia, 2008.
- Tertrais, Bruno. *A Comparison Between U.S., UK and French Nuclear Policies and Doctrines*. Nuclear Policy, Paris: Centre National De La Recherche Scientifique, 2007.
- . *A Comparison Between U.S., UK And French Nuclear Policies And Doctrines*. Paris: Chercheur associe au CERI, 2007.
- Tertrais, Bruno. *Entente Nucleaire*. Options for UK-French Nuclear Cooperation, Washington, D.C.: BASIC Trident Commission, 2012
- Tertrais, Bruno. "France." In *Governing the Bomb: Civilian Control and Democratic Accountability of Nuclear Weapons*, by Bates Gill and Heiner Hanggi Hans Born, 103–131. Oxford and New York: Oxford University Press, 2010.
- Tertrais, Bruno. "France." In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 103–127. New York: Oxford University Press, 2010.
- Tertrais, Bruno. "France." In *Governing the Bomb*, by Bates Gill and Heiner Hanggi Hans Born, 103–132. New York: Oxford University Press, 2010.
- Tertrais, Bruno. *Nuclear deterrence in 2030*, Paris: Foundation pour la Recherche Strategique, 2007.
- Tertrais, Bruno. "The Last to Disarm? The Future of France's Nuclear Weapons." *Nonproliferation Review*, Vol. 14, 2007: 251–273.
- Thies, Wallace J. *Friendly Rivals: Bargaining and Burden-Shifting in NATO*. Armonk: M. E. Sharpe, Inc., 2003.

- Timeanddate.com. *Day of German Unity in Germany*. n.d. Accessed January 26, 2013.
<http://www.timeanddate.com/holidays/germany/german-unity-day>.
- TNP, France. Disarmament. 2010. Accessed May 12, 2012.
<http://www.francetnp2010.fr/spip.php?article92>.
- Tocqueville, Alexis De. *The Old Regime and the French Revolution*. New York: Doubleday, 1955.
- Tran, Pierre. French Defense Ministry Faces Budget, Staff Cuts. June 29, 2012. Accessed August 27, 2012.
<http://www.defensenews.com/article/20120629/DEFREG01/306290005/French-Defense-Ministry-Faces-Budget-Staff-Cuts>.
- . MBDA Proposes Extending Range of Aster. March 20, 2012. Accessed September 06, 2012.
<http://www.defensenews.com/article/20120320/DEFREG01/303200009/MBDA-Proposes-Extending-Range-Aster>.
- Union, European. *A Secure Europe in a Better World*. European Security Strategy, Brussels: European Union, 2003.
- Union, European. *A Secure Europe in a Better World- European Security Strategy*. Security Strategy, Brussels: European Union, 2003.
- . European Security and Defense Policy. 2009. Accessed August 25, 2012.
http://www.iss.europa.eu/uploads/media/ESDP_10-web.pdf.
- . European Union. 2012. Accessed October 20, 2012.
http://europa.eu/index_en.htm.
- Union, European. *Report on the Implementation of the European Security Strategy*. Security Strategy, Brussels: European Union, 2008.
- University, Cornell. Annual country reports on terrorism. 2012. Accessed August 30, 2012. <http://www.law.cornell.edu/uscode/text/22/2656f>.
- U.S. National Archives and Records. “Teaching With Documents: Documents Related to Churchill and FDR.” 2012. Accessed October 18, 2012.
<http://www.archives.gov/education/lessons/fdr-churchill/>.
- Weir, Gary E. Silent Defense. April 27, 1999. Accessed November 26, 2012.
<http://www.navy.mil/navydata/cno/n87/history/fullhist.html>.
- Wittner, Lawrence S. “*The FOrgotten Years of the World Nuclear Disarmament Movement, 1975–78**.” *Journal of Peace Research* Vol 40, 2003: 435–456.

- Woolf, Stuart J. *Napoleon's Integration of Europe*. London: Routledge, 1991.
- Yost, David. *Adelphi Papers, number 194*. French Deterrence, London: The Garden City Press Ltd, Letchworth, 1984.
- Yost, David. "France's Evolving Nuclear Strategy." *Survival*, 2005: 117–146.
- Yost, David. "France's new nuclear doctrine." *International Affairs*, 2006: 701–721.
- . France's Nuclear Deterrence Strategy: Concepts and Operational Implementation. n.d. Accessed August 26, 2012.
kms1.isn.ethz.ch/serviceengine/Files/ISN/...20af.../Chapter+7.pdf.

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