

THE HENRY L. STIMSON CENTER

**Atomic Bombast:
Nuclear Weapon
Decisionmaking in Sweden
1945-1972**

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Pragmatic steps toward ideal objectives



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Preface

Since the invention of the atomic bomb, the world has faced the threat that these weapons might spread to more and more states as the related technology and civilian nuclear power became globally available. Despite dire predictions to the contrary, however, only a handful of states beyond the initial five “declared” nuclear weapon states are known or suspected to have actually built a nuclear device. Yet, in addition to these blatant proliferators, there exists another category of potential “proliferators”-- “virtual” nuclear weapon states. Countries that fall in this category have acquired the know-how, technology, and access to fissile materials necessary to develop nuclear weapons, but have chosen not to actually build an arsenal. Japan, South Korea, Sweden, and Taiwan are often cited as examples. In the case of such “virtual” nuclear powers, one analyst argues, the critical question is “not whether” these states could build nuclear weapons but “how quickly.”¹

How concerned should we be about these “virtual” nuclear states? What factors might prompt a “virtual” nuclear power to develop an arsenal of assembled, usable, and deployed weapons? Conversely, what factors might work toward keeping states with “virtual” nuclear arsenals from acquiring a full-blown weapon capability?

In this study of Sweden’s “virtual” nuclear capability, Paul Cole demonstrates that decisions related to nuclear weapons are likely to involve a complex calculus of international, domestic, and cultural/historical factors and to entail multiple decisions. Before Sweden finally signed the nuclear Non-Proliferation Treaty in 1972, Swedish leaders had embarked on a research program that provided the country with the know-how required to produce sophisticated nuclear weaponry even without actual testing. To secure weapons-grade fissile material, Sweden began a program to produce plutonium indigenously by burning domestically mined uranium in heavy water power reactors. It also purchased uranium reactor fuel and small quantities of weapons-grade plutonium from outside sources. Military planners worked seriously on defining the role nuclear weapons could play in Swedish defense policy. By the late 1950s, everything was in place for Sweden to become a nuclear weapon state.

Yet, as Cole points out, Sweden faced many constraints, both domestic and international, on the development of a nuclear arsenal. First, there were compelling strategic reasons to refrain from weapons production and deployment. Sweden was warned by the Soviets that there was no such thing as a “neutral” nuclear deterrent. Swedish leaders consequently reasoned that an independent nuclear capability would

¹ Michael Mazarr, “Virtual Nuclear Arsenals,” *Survival*, vol. 37, no. 3 (Autumn 1995): 8. On virtual nuclear arsenals, see also Roger Molander and Peter Wilson, *The Nuclear Asymptote: On Containing Nuclear Proliferation*, MR-214-CC (Santa Monica, Calif.: RAND, 1993).

make Sweden a more likely target for attack in the case of an East-West nuclear exchange. Nuclear weapons, therefore, would have been more of a war magnet than a deterrent for Sweden.

The economic costs of nuclear weapons also proved to be quite prohibitive. Sweden could not afford a welfare state, strong conventional defenses, and a nuclear force at the same time. Since the ruling Social Democratic party in Sweden was committed to the welfare state, in the end a choice had to be made between conventional and nuclear capabilities.

Finally, there were important domestic political reasons for a policy of forbearance. While Sweden sustained a *de facto* nuclear weapons program, Swedish leaders—both at home and abroad—stressed the objectives of disarmament and the virtues of neutrality. Over time, Sweden's disarmament rhetoric and neutral ideology helped to create a national anti-nuclear *ethos* among the Swedish population. When the time came to move forward with the production, assembly, and deployment of nuclear weapons, Sweden's leaders, afraid to pay the political price of weapon acquisition, balked. Nuclear weapons were simply incompatible with Sweden's image of itself as the model peaceful state.

The decision to forego nuclear weapons did not come easily. For a number of years, Swedish leaders postponed a final decision on weapons production while continuing research on weapon design. In the final analysis, however, policy makers concluded that the costs associated with nuclear weapons outweighed the potential benefits. As Cole concludes, in the end it was politics, rather than a lack of technology, that led to the decision to end Sweden's nuclear weapon program.

Although Sweden made a conscious choice not to become a nuclear weapon state and submitted its nuclear facilities to international inspections under the NPT, it still retains the capability to produce nuclear weapons. Cole cautions that Sweden's 1972 decision was more of a moratorium than an eternal ban. In evaluating the durability of Sweden's decision, the critical question is not just "how quickly" Sweden could build nuclear weapons, but rather what circumstances might compel it to do so. As Cole reminds us, a distinction must be made between the technical ability to produce nuclear weapons and the political will to do so, both of which are necessary for a country to acquire nuclear weapons. His study underscores the important—and often decisive—role domestic political structures and political culture may play in proliferation incentives and disincentives.

This study is the third in a series that examines decisionmaking in countries that have chosen to back away from the nuclear threshold. Using a common framework of analysis, these studies seek to assess the relative influence of international, regional, and domestic factors in helping to change perceptions of the utility and/or the cost of nuclear weapons, and to examine closely the implementation and verification of decisions to

forego the development of nuclear capabilities. The studies are authored by experts with an extensive understanding of non-proliferation issues and, importantly, of the domestic and regional politics of the countries under review.

This series is part of the Henry L. Stimson Center's Project on Eliminating Weapons of Mass Destruction, which seeks to encourage a national and international debate on the long-term nuclear future. The project is based on the premise that the end of the Cold War, the dissolution of the Soviet Union, and grave dangers of proliferation provide both reason and opportunity to reexamine fundamental assumptions regarding the relative benefits and risks associated with weapons of mass destruction. Through research and public education efforts, the Center seeks to explore the obstacles to, and implications of, the progressive elimination of all nuclear, chemical, and biological weapons from all states, and to consider measures that might bring all states closer toward that goal.

A central focus of the project's research efforts are evolving national and international perceptions of the benefits, costs, and risks associated with weapons of mass destruction. Understanding the motivations for proliferation in the post-Cold War environment is essential to this task. Equally important, however, is an examination of cases of nuclear forbearance, which may hold valuable lessons for future non-proliferation efforts.

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About the Author

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The data for this report derive from extensive research in recently declassified Swedish military archive documents, which appear in English in Cole's translation.

Atomic Bombast: Nuclear Weapon Decisionmaking in Sweden, 1945-1972

From 1946 to approximately 1972, the Swedish government sustained a research program that in many ways was indistinguishable from an effort to produce nuclear weapons. Vast amounts of state funds were expended to create a complete domestic nuclear weapon infrastructure, from the mining of uranium to the assembly and testing of weapons. The Swedes also accumulated considerable theoretical expertise that, taken together with the impressive range of engineering accomplishments, created a viable nuclear weapon option. Yet, after more than two decades of weapon-related research, the Swedish government chose not to authorize the production or acquisition of nuclear weapons, opting instead to sign the Nuclear Non-Proliferation Treaty (NPT). Following its 1972 decision to remain non-nuclear, Sweden retained an active, but significantly curtailed, research effort intended to understand the principles of nuclear weapons. Research clearly associated with weapon production, however, was strictly prohibited.

When Sweden signed the Nuclear Non-Proliferation Treaty in 1972, there were no technical barriers to the production of nuclear weapons, but the necessary political will was absent. The decision to remain a non-nuclear state was motivated primarily by domestic political factors, deriving, in part, from ideological considerations put forward by the governing Social Democratic Party. The government concluded that nuclear weapons would divert funds from social welfare programs and make it impossible for Sweden to sustain with any credibility the line that had guided Swedish foreign policy since the end of the Napoleonic era—nonalignment in peace with the intent to remain neutral in war. By the late 1960s, Swedish leaders had determined that the domestic and foreign political costs and risks of nuclear weapons outweighed any potential benefits.

There is, of course, no such word as “never” in international affairs. The decision to abstain from production was not necessarily irreversible. The United States has championed the principle of international law (*rebus sic stantibus*), which asserts that nations have the right to reassess treaty commitments in light of unexpected developments and shifts in the balance of power. Swedish officials hold similar views on the permanence of treaty obligations. This does not mean, however, that Sweden is prepared to reverse its policy and acquire nuclear weapons on a moment’s notice. The story of Sweden’s nuclear weapon research should make a clear distinction between political will and technical capability. It takes both, in abundance, to acquire nuclear weapons.

This paper focuses on Sweden's nuclear weapon research effort, with particular emphasis on the decision to stop the program prior to the test and production phase.¹ The time frame covered by this paper, 1945-1972, includes significant technological and political events. The paper begins with an overview of the domestic context of the Swedish nuclear program. It then summarizes Sweden's nuclear weapon research efforts, and discusses why nuclear ambitions began to diminish in the mid-1960s. The paper concludes with an assessment of why Sweden scaled back such an elaborate, sophisticated, and expensive research program to a bare minimum by 1970 and subsequently signed the Nuclear Non-Proliferation Treaty in 1972. A brief review of the historical context of Swedish security policy is provided in Appendix 1 for the reader who is unfamiliar with this history.

Secrecy, Language, and Access to Information: Debunking the Swedish Myth

Over the past decade, Sweden's nuclear weapon program has been subjected to front page scrutiny by the press in the United States at least twice. Though this coverage has greatly influenced the perception of Sweden's effort, the quality of the reporting has been questionable. Imagine, for a moment, the reliability of an article on British security policy written by a journalist who does not speak English, who has no appreciation of the Battles of Britain or Trafalgar, is not familiar with Winston Churchill, and who has visited England for only a few days. The product probably would not be taken seriously in most places. Yet the views of the English-speaking world concerning Sweden's security policy tend to be shaped by people who do not speak Swedish, have no sense of the significance of the Battles of Lützen and Poltava, are not familiar with the consequences of the foreign policies of Gustav IV Adolph or Östen Undén, and whose familiarity with the country is limited to a few days in Stockholm on a research visit.

A front-page article in the *Washington Post* in November 1994, for example, questioned Sweden's "will" to remain non-nuclear in light of the fact that elements of Sweden's research program still exist.² There is no indication in the article of who in Sweden has advocated or is likely to advocate the acquisition of nuclear weapons. A closer look at who has done so undermines claims that the Swedish "will" to remain non-nuclear is wavering. In fact, over the past decade the most vocal proponents of nuclear weapons in Sweden have been the European Labor Party (Lyndon LaRouche's group)

¹ The reader looking for an extensive presentation of primary source evidence will find other publications on this topic to be useful complements to this paper. See Paul M. Cole, *Sweden Without the Bomb: The Conduct of a Nuclear-Capable Nation Without Nuclear Weapons* (RAND, Santa Monica, CA: MR-460, 1994), which derives in large measure from Paul M. Cole, *Neutralité du jour: The Conduct of Sweden's Security Policy Since 1945*, Ph.D. diss., The Johns Hopkins Nitz School of Advanced International Studies, 1990; Wilhelm Agrell, *Alliansfrihet och atombomben—Kontinuitet och förändring I den svenska försvarsdoktrin 1945-1982* (Stockholm: Liber, 1985); Warren Donnelly and Mark Martel, *Sweden's Nuclear Test* (Washington, DC: Congressional Research Service, 1985, Issue Brief IB855143); and Martin Fehrm, "Sweden," in *Nonproliferation: The Why and the Wherefore* (Stockholm: International Peace Research Institute, 1985).

² Steve Coll, "Neutral Sweden Quietly Keeps Nuclear Option Open," *Washington Post*, 25 November 1994.

and the iconoclastic Skåne Party, which has also advocated the succession of Skåne from Sweden (a region in southern Sweden), membership for the province in NATO, deployment of Pershing II and cruise missiles in Skåne, and the distribution of stills to private homes for the production of tax-free vodka. The marginal and extremist nature of the pro-nuclear forces in Swedish society renders absurd the proposition that Sweden may be poised to acquire nuclear weapons or that the “will” to remain non-nuclear is in doubt. Indeed, in order to comprehend just how absurd this proposition is, one must defer to a proposition analogous to the American political scene. If a Swedish journalist were to report that America’s will to remain a non-communist nation had been drawn into question due to the existence of a Spartacus cell in Berkeley, the average observer of the American scene would reject the claim out of hand.³

Debunking the myth of Swedish anti-nuclearism consequently requires breaking through some formidable perceptual and informational barriers. Although the image of Sweden as an advocate of disarmament has its roots in historical experience, Sweden’s ruling party could not have sustained that myth without skillful exploitation of secrecy and linguistic barriers, and by limiting access to information.

Sweden is a remarkably secretive and closed society in which official information, particularly primary data concerning national defense issues, traditionally has been difficult to obtain. In the seventeenth and eighteenth centuries, the parliamentary body responsible for managing Sweden’s foreign affairs for over a century, for example, was called the “Secret Committee” (*Hemliga utskottet*). In the twentieth century, the largest financial transaction in Scandinavian history, the decision to procure the *Viggen* combat aircraft, was not made known to the entire cabinet of the Swedish government until after the order had been placed.⁴

Impressing a positive image of Sweden on the outside world was made easier by a linguistic barrier. The majority of the contemporary literature in English concerning Sweden’s foreign and security policy has been written, by and large, by people who do not speak or read Swedish.⁵ Primary source evidence (archive material, interviews,

³ Some of the most misleading impressions of Sweden’s nuclear weapon program have been made by American scholars, particularly those who rely on newspaper articles based on translations of Swedish publications. One of America’s most prominent analysts of European politics, for example, concluded in 1987 that Sweden was about to acquire atomic weapons and no one seemed to care. The source cited in support of this conclusion is an American newspaper account of a Swedish technical journal. [See David Calleo, *Beyond American Hegemony* (New York: Basic Books, 1987), 121.] Thus, one of America’s foremost scholars on European affairs based an opinion concerning Sweden’s nuclear weapon ambitions on a newspaper article based on a translation of a Swedish trade journal. The American scholar’s conclusion is not supported by the trade journal article; rather, a misinterpretation of the article by the newspaper supported the scholar’s conclusion, which, incidentally, was completely erroneous. It is no surprise, therefore, that the American conventional wisdom concerning Sweden’s nuclear weapon program is often not well established in fact. With these views of Sweden’s nuclear weapon program in mind, it is useful to consider Swedish history and some conventional views of it.

⁴ The research and development costs for the *Viggen* project consumed a proportion of Swedish resources equivalent to the percentage of R&D consumed by the *Apollo* man on the moon project in the United States.

⁵ Swedish diplomats and Social Democratic Party officials have written books and pamphlets concerning Sweden’s security policy while on leave at various institutions in America. While some of these publications are presented as scholarly works, they all bear to one degree or another the stamp of the Social Democratic Party’s foreign policy line. For example, in deference to the Party’s

diaries, etc.), which is scarce in the literature of national security studies in many countries, is nearly nonexistent in English-language literature concerning Sweden's security policy.⁶ In order to compensate for the lack of primary source data and information, analysts turn to tertiary sources or the English-language pamphlets and books produced, in many cases, by officials employed by the Swedish government. One also finds derivative explanations of Sweden's security policy that stitch together newspaper and journal articles that often lack, either partially or completely, a sense of context or relative political value.⁷ Not surprisingly, the linguistic barrier and insufficient knowledge of Swedish history have produced some appalling errors.⁸

Even those who are able to penetrate the linguistic barrier have not been able to compensate for the Swedish policy concerning access to primary sources. The venerable ground rule for archive research, 'equal access to all,' for example, is not followed in Sweden. Access to government records in general and the papers of former officials in particular is somewhat arbitrary.⁹

The problem of access to information concerning national security decisionmaking in Sweden is compounded many times over by the fact that one political party, the Social Democrats (SAP) Sweden, has dominated Sweden's foreign and defense policy planning for the better part of the twentieth century. There is no statutory access to SAP archives, and SAP loyalists serving in government have often used party and other informal networks to convey information without leaving a trail of paper in the National Archives. Foreign Minister Östen Undén (1945-1962), who exercised a decisive influence on Sweden's post-war foreign policy, distinguished Foreign Ministry personnel by the standard of whether they were, in his view, SAP "party friends."¹⁰ The

sensitivities, in the Swedish language version of Ambassador Örjan Berner's book, *Sovjet och Norden* (Stockholm: Bonnier Fakta, 1985), which was written during a sabbatical at Harvard, observations about the similarity of Swedish and Soviet foreign policy during the Palme era were deleted. In recent memory, the most transparent shill of a Foreign Ministry memorandum masquerading as a "scholarly" work was John HM Hagard's *Nordic Security* (New York: Institute for East-West Studies, 1987).

⁶ Exceptions tend to be the odd academic study (usually a dissertation) by a non-Swede or publications in English by Swedish researchers and scholars, some of which are first-rate. The list of non-Swedish scholars who have produced first-rate publications on Sweden's security policy includes Adam Roberts, Tomas Ries, Gordon McCormick, and Steven Koblik.

⁷ See, for example, William J. Taylor, "The Defense Policy of Sweden," in Douglas J. Murray and Paul R. Viotti, eds., *The Defense Policies of Nations* (Baltimore, MD: The Johns Hopkins University Press, 1982).

⁸ One example is the assertion, "Sweden has never been invaded," that is used to build an argument concerning the putative success of Sweden's historic foreign policy line. See Joseph Kruzal, "New Challenges for Sweden's Security Policy," *Survival* (Vol. XXX, No. 6, November-December 1988). This article, with its historical errors intact, was reprinted as "Sweden's Security Dilemma: Balancing Domestic Realities with the Obligations of Neutrality," in Bengt Sundelius, ed., *The Committed Neutral—Sweden's Foreign Policy* (Boulder, CO: Westview Press, 1989). Finland, which was an integral part of Sweden longer than the present province of Skåne has been, was invaded and taken from Sweden by Russia, for example, in the early nineteenth century.

⁹ The seven-year effort by Ambassador Sven Dahlman to locate, retrieve, and declassify the journal of Amb. Sven Grafström is a case in point. Grafström's journal was stolen from his widow and, after review by Foreign Minister Undén, locked up in the Foreign Ministry archives for over thirty years. Dahlman was unable to arrange the return of the original journal to Grafström's widow, but succeeded in publishing a photocopy of the manuscript as *Anteckningar* (Stockholm: Kungl. Samfundet för utgivande av handskrifter rörande Skandinaviens historia, 1989), two volumes. Grafström's widow, who was born in Germany, was told by the head of the Royal Library, who originally "borrowed" the manuscript, that her husband's journal could not be left in the hands of a "foreigner."

¹⁰ Sven Grafström, *Anteckningar 1945-1954* (Stockholm: Kgl. Samfundet för utgivande av handskrifter rörande Skandinaviens historia, 1989), X. Undén wrote in his diary after reading Grafström's observation, "A Social Democratic foreign minister does not have an easy time finding loyal colleagues from the career service."

late Olof Palme was known to use public telephones at airports, for example, to discuss matters of state in order to eliminate the possibility for notes or any other written record of the conversations to be made and subsequently made part of the official record.

The Social Democrats also have made repeated efforts since 1945 to inhibit public scrutiny of Sweden's defense and foreign policies, in order to sustain Sweden's positive image. In March 1952, *Dagens Nyheter*, a major Swedish daily, commented on the SAP's efforts to stifle public debate:

The tendency to throttle every independent assessment of foreign policy by reference to the sacred freedom from alliances is gaining ground. ...the term 'alliance-free' sets a bar. People try to make this term—a vaguer and somewhat more palatable symbol of neutrality—into a gag order for themselves and others.

Thirty years later, SAP officials continued to make efforts to suppress debate over Sweden's policy at home and abroad. Pierre Schori, then Assistant Secretary of State for Foreign Affairs, said in 1988:

We can't have an open discussion of alternatives to our foreign policy or neutrality. This would harm Sweden's credibility, even in peacetime.¹¹

Swedish officials, such as Schori and others from the Swedish Embassy in Washington, have even attempted to interfere with scholars working on Sweden's security policy.¹² In the 1980s this interference became so pronounced that some scholars found it necessary to add disclaimers to publications, such as "No one at the Swedish Institute (a branch of the Swedish Foreign Ministry) interfered with either the content or the academic purpose of the project in any respect."¹³

Swedish officials have exploited the lack of primary source material, the linguistic barrier, and the tradition of secrecy to launch White Papers and policy statements into a relative information vacuum, confident that there would be limited

¹¹ John Asare, "Atombomben gjorde mig till socialist," *Lidingö Posten*, 17 February 1988.

¹² Examples of this interference that have been documented in the Swedish press and elsewhere include Schori's attempt to have Dr. Ann-Sophi Nilsson dismissed from Georgetown University for her work on the book, *Moral Superpower*; Deputy Chief of Mission Ulf Hjertsonsson's interference with the Center for Strategic and International Studies; First Secretary John HM Hagard's attempt to suppress a conference paper critical of Sweden published by the Wilson Center for International Scholars; and the visit by the Director of Long-range Planning at the Swedish Ministry of Defense, Nils Gylden, to RAND, where he suggested that if a RAND report on submarine violations of Sweden's territorial waters did not please the Swedish government, the author ran the risk of being stopped at immigration on his next visit to Sweden and not allowed into the country. The author, Gordon McCormick, refused to revise the report.

¹³ Bengt Sundelius, editor, *The Committed Neutral—Sweden's Foreign Policy* (Boulder, CO: Westview Press, 1989), vii.

informed domestic comment and perhaps none at all from the outside world. The extant image of Sweden's national security policy in the English-speaking world consequently is largely an amalgam of interpretations derived from tertiary sources and preferred interpretations presented in governmental reports and White Papers. Some American reports, for example, are little more than translations of Swedish publications, while others tend to misunderstand or, worse, take at face value Swedish views published in English.¹⁴ Even US intelligence reports have not proven very reliable accounts of Swedish reality. In 1949, for example, the CIA concluded that there was "no sign" that Sweden was working on an atomic bomb, when in fact a weapon research program had been in place for over four years.¹⁵ In 1952, a Top Secret CIA National Intelligence Estimate on Sweden had this to say about nuclear research: "[Sweden's] scientists rank with the world's best in ferrous metallurgy and medicine, for example, and it expects to have a small underground atomic pile operating in 1953."¹⁶

If one follows the standard historian's practice, however, which is to 'let the sources speak,' then a different picture emerges. Throughout the 1950s, Sweden sustained a pragmatic and politically prudent nuclear weapon research program integrated into Sweden's overall national defense effort. When the domestic political climate could no longer tolerate the gap between the preferred image of Sweden and the looming nuclear weapon reality, the political will to acquire weapons vanished rather quickly.

The Domestic Sources of Swedish Policy: Historical Experience, *Ethos*, and Ideology

The origins of Sweden's nuclear weapon research program, as well as the reasons for its eventual demise, are to be found in the shared historical experiences and ideological influences that shaped post-war Swedish views on power, the requirements for national security, and the country's role in a divided Europe.

Armed forces, particularly large and expensive weapon systems, can be powerful expressions of a nation's collective *ethos* (a set of moral or guiding beliefs) regarding a state's role in international affairs. Perhaps the best example of a nation in which weapons are associated with the national *ethos* is France. During the Fifth Republic, Charles de Gaulle successfully pressed the case for an independent French nuclear deterrent both to assert French interests in the post-World War II international order and to create a symbol of France's greatness. The German Navy's battleship *Bismarck* and

¹⁴ The most extensive piece ever published by the Library of Congress's Congressional Research Service concerning Sweden's nuclear weapon program was a translation of Christer Larsson's work. Christer Larsson, "Historien om en svensk atombomb, 1945-1972," *Ny Teknik*, April 1985. A brief follow-up to this translation was published six months after Larsson's work appeared. Warren Donnelly and Mark Martel, *Sweden's Nuclear Test* (Washington, DC: Congressional Research Service, Issue Brief IB855143, 13 November 1985).

¹⁵ *An Estimate of Swedish Capabilities in Science* (Secret) Copy No. 1 for the President of the United States, CIA OSI-1/49, p. 29.

¹⁶ *Sweden's Position in the East-West Conflict* (Top Secret) (CIA, 26 March 1952), NIE-49, 2.

the USAF B-52 are two other large weapon systems that have been associated with or used as symbols of national power.

In order to understand the rise and fall of Sweden's nuclear weapon program, one must consider two issues. First, what is the historical relationship in Sweden between large weapons and shared beliefs of the "proper" way to express national power? Second, what does history teach Swedes about the consequences of participating in great power politics? Put another way, aside from the country's real or perceived security requirements, was it consistent or inconsistent with Swedish history and the national *ethos* to express national power and prestige through the acquisition of nuclear weapons?

Swedish history is replete with examples that suggest Sweden fares better when it stays out of great power political struggles. Over the past four hundred years, whenever Sweden became engaged in the struggle for the mastery of Europe, it paid a heavy price in the end. Sweden's two hero kings, Gustav II Adolph and Charles XII, bled the home country white during their military expeditions abroad. When Gustav Adolph was buried in Stockholm in 1632, no foreign dignitaries were invited to the funeral, according to contemporary accounts, "because they will see our poverty." Charles XII spent many years chasing Peter the Great across central Europe and, failing that, trying to conquer Norway. By the end of his reign in 1712, the results of the endeavor were decimation of the Swedish economy, a loss of nearly all of Swedish territory on the southern coast of the Baltic, a massive depopulation of the agrarian sector, and a reduction in the Swedish merchant fleet by nearly half. Sweden's aloofness and neutrality in the East-West conflict during the twentieth century reflect, in large measure, the lessons of what Swedes refer to as the "Great Power era."

In the seventeenth and eighteenth centuries, Sweden was one of the most important arms producers in the world. The name Bofors is synonymous with state-of-the-art weapon technology, particularly in cannons and missiles. But while Swedes are no strangers to military hardware, Sweden has not produced a weapon with the explicit intent of trying to embody a sense of national greatness since the 1920s, when pocket battleships (so-called F-boats) were acquired.¹⁷ To find an example of when Sweden expressed national hubris through the use of military forces or weapons before the F-boat controversy, one has to turn back the clock to the late 1700s or early 1800s, when Gustav III and Gustav IV attacked Russia. In both cases, Sweden was badly beaten and, in the case of Gustav IV, the country was humiliated and the king forced to abdicate. The important point here is the lesson of history: Whenever Sweden attempted to manifest a sense of national hubris through military means or by investment in showpiece weapons, bad things happened.

¹⁷ This debate was eerily similar to the debate over whether to produce the *Viggen* fighter-bomber in the 1960s.

Sweden's anomalous position during the Cold War may have reinforced the tendency to steer clear of overt power projection. After World War II, Sweden chose not to join NATO, but to continue its traditional policy of neutrality. In fact, however, Sweden benefited implicitly from the system of Cold War alliances in Europe. Sweden's political and military leaders assumed that the US commitment to defend its NATO allies, with nuclear weapons if necessary, in fact, extended to Sweden as well. Under these circumstances, a Swedish nuclear arsenal would contribute minimally to deterrence, and indeed might actually undermine Swedish security, if it caused Sweden to be targeted during an East-West conflict.

For historical reasons, therefore, Sweden's national *ethos* is incompatible with the construction of weapons for the sake of national pride, prestige, or power projection. The contrast to countries such as France, where the national *ethos* is used as a justification for weapons acquisition, is obvious. Yet, anti-nuclear attitudes and beliefs were, at best, latent, and represented only a potential constraint on Swedish decisionmakers. Nuclear weapons could still be compatible with the national *ethos* if they were perceived as an indispensable asset for national defense. In the 1950s and 1960s, Swedish scientists were capable of producing nuclear weapons, and military analysts made a compelling assessment of how these weapons could contribute to national security requirements. For two decades, this was enough to allow pro-acquisition sentiments to flourish.

Pro-nuclear views and sentiments, however, never prevailed within governmental circles, although the Social Democratic Party was not united around a non-nuclear position until the late 1960s, if not as late as the early 1970s. The SAP was committed first and foremost to implementation of an ambitious and costly social welfare program. In addition, a faction of the party was strongly committed to an ideological tradition that rejected realist notions of the national interest and balance of power politics. The split in the party was generally between pragmatists, who supported measures that would contribute to Swedish interests in the world as it existed and thus were willing to contemplate acquisition of an independent nuclear capability, and the more ideological component of the party that sought to use Swedish foreign policy as a vehicle for advancing a vision of how the world should be and therefore roundly rejected a nuclear role for Sweden. This split was often revealed in newspaper and journal articles that referred to Sweden's obligations in the East-West conflict (pragmatists) or, alternatively, the opportunities for Sweden to be a moderating element or a buffer between the two emerging political-military blocks (ideologists).

In the end, the anti-nuclear weapon faction of the ruling party, which took an ideological stand in opposition to nuclear weapons, triumphed. This faction carefully cultivated an image of Sweden, both at home and abroad, that perfectly complemented the country's collectively shared *ethos*. It was an image that depicted Sweden as a nation of peace and disarmament, whose commitment to nuclear forbearance could set a

standard for the rest of the world. In creating the myth of Swedish anti-nuclearism, they transformed a latent public wariness of nuclear weapons into a real political constraint on the acquisition of an independent nuclear arsenal. In a country where the most important barrier against nuclear acquisition—then as now—is political will, the importance of national beliefs and images should not be undervalued.

Sweden's Nuclear Weapon Program, 1945-1970

For over one-quarter of a century, the Swedish government supported research consistent with the intent to one day produce and deploy nuclear weapons. Evidence from Swedish archives suggests that enough progress was made in theoretical questions, weapon design, and component testing to eliminate most doubts about Sweden's ability to construct a nuclear weapon. The Swedish government planned originally to create a domestic capability that would include all components necessary for bomb production: uranium mining and reprocessing; plutonium production; and weapon design, testing, assembly, and storage. Though the project approached the stage in which underground nuclear testing was planned, there is no available evidence suggesting that the Swedes collected weapon-grade fissile material in sufficient quantities to construct a weapon.

Nuclear Weapon Research

The Swedish research program initially was motivated primarily by the need to keep pace with other technologically advanced countries. During World War II, Sweden's armed forces, with the exception of the Air Force, had been cut off from western technological developments. After the war ended, the armed forces consequently were eager to move ahead with research on jet aircraft, missiles, rockets, and atomic "wonder weapons." Similarly, Swedish defense industries, which had armed European armies for centuries, were particularly keen to keep up with emerging foreign competition in state-of-the-art military technologies. The opportunity to express Swedish national pride through advancements in basic science also resonated throughout the political and scientific community. The SAP's nuclear weapon committee report from 1959, for example, emphasized that "the demand for a Swedish atomic weapon has been motivated primarily by the desire to see Sweden keep up with technical developments in weaponry."¹⁸ Domestic sources of technical expertise were relatively abundant in Sweden when research into atomic weapons began shortly after the nuclear strikes on Hiroshima and Nagasaki. And Swedish minds were not immune to what Niels Bohr referred to as the "irresistible sweetness" of the puzzle of subatomic physics, a field that attracted the brightest minds in the world.

¹⁸ Kärnladdningsgruppen, *Kärnladdningsgruppens betänkande*, Supreme Commander (Swedish Top Secret) February 1962, A4.

Funding for Sweden's nuclear weapon research program was divided into five general areas:

- Research (basic science and policy)
- Construction funds for reactors, and separation and enrichment facilities
- Plutonium production
- Acquisition of delivery systems
- Testing and assembly of nuclear weapons

Due to the compartmentalization of the program, the co-mingling of civilian and military projects, and the fact that the program was abandoned officially while additional research continued in secret, it is very difficult to attach even a general figure to Sweden's efforts. The extent to which each of these areas was funded over the life of the program, moreover, is only partially available from Swedish sources. Available evidence, however, points to a large, expensive, and comprehensive weapon research program. The Swedish government invested billions of kronor into civilian nuclear weapon research; in addition, the military contributed untold billions from individual service appropriations. Although the total amount spent on the program is unknown, several indicators provide sufficient grounds on which to build an estimate. In 1962, for example, the Supreme Commander of the Swedish Armed Forces was informed that the "costs for the nuclear weapon program have been estimated to be in the range of 5 percent of the total budget for the defense organization during the ten-year period 1965-1975."¹⁹ Sweden's actual defense expenditures for that ten-year period amounted to 223,366 million kronor; thus, 5 percent of the total would equal 11,118 million Swedish kronor (SEK). For illustrative purposes, if one takes the average value of the SEK to be 4.75 to the dollar, the Swedish military's share of nuclear weapon research was approximately \$2.34 billion in current prices and probably more, since the official research phase did not end until approximately 1970. For comparative purposes, the cost of China's weapon program, which was similar in scope to Sweden's effort, has been estimated to have been the equivalent of "one large modern steel facility," or 10.7 billion Chinese yuan (\$4.1 billion in 1957 prices).²⁰

Research was organized along structures typical for Sweden: private research facilities were funded by a mixture of state and private capital. The Swedish National Defense Research Institute (FOA) was created in 1945 to consolidate and coordinate military research. Since the initial goal was to construct without outside assistance a complete, though small-scale, domestic nuclear weapon production capability, a series of research centers dedicated to atomic and nuclear issues was created. By 1947 a 32-inch cyclotron was in operation at the Nobel Institute of Physics and two were under construction; an 88-inch cyclotron at the Institute for Physical Chemistry under the

¹⁹ *Kärnladdningsgruppens betänkande*, C2.

²⁰ John W. Lewis and Xue Litai, *China Builds the Bomb* (Stanford, CA: Stanford University Press, 1988), 107-8.

direction of Professor Theodor Svedberg, and a high-voltage accelerator at the Royal Institute of Technology (*Kgl. Tekniska Högskolan*, or KTH) were in operation.

As a part of the effort to create a self-contained domestic bomb production capability, the Swedish Atomic Energy Committee's 1946 report focused on the domestic availability of uranium. At the time, the CIA recognized Sweden to be one of the world's largest potential sources of uranium (in shale-oil fields) in low-grade ores.²¹ According to the Swedish plan, uranium would be mined in the central part of the country for use in heavy water reactors. The cost of imported uranium would have been lower than ore mined domestically; even so, the Swedish plan to construct a bomb based on plutonium rather than enriched uranium would have been even less costly.²² The Swedish approach was to produce plutonium, an expensive procedure in itself but less costly than enriching low-grade uranium, which is extremely expensive to do even to produce minimal amounts for research.

There was another important reason why Swedish officials accepted the relatively high cost of mining uranium in Sweden rather than purchasing it on the international market. Importing uranium would have required Sweden to agree to a range of political commitments and restrictions such as those described in the 1955 US-Swedish nuclear research agreement.²³ Swedes considered the subsequent purchase of plutonium from France to be preferable, in part, because the "US-Swedish agreement on peaceful uses of atomic energy restricted Swedish use of US-supplied uranium."²⁴

Sweden's reactor program was intended to provide an indigenous source of plutonium. Sweden's first experimental reactor, named R1, was built in a cavern blasted into the rock beneath the KTH in Stockholm. Reactor R1 was loaded with three tons of metallic uranium from France and five tons of heavy water that had been purchased from Norway "with no questions asked." The maximum yield was half a gram of plutonium per day.²⁵ The Supreme Commander had concluded in 1962 that "the cheapest method to produce plutonium is to build reactors dedicated for this purpose."²⁶ The Ågesta power reactor, which produced energy for civilian consumption and nuclear material for military research purposes, was envisioned as the first source of plutonium for weapon research. It was to be followed by the construction of Marviken, a reactor dedicated to military purposes. In order to accelerate the program, the Supreme Commander observed

²¹ Low grade ores contain .02 per cent uranium while high-grade ores consist of 50 to 60 percent.

²² A 1959 Atomenergi report noted the price per kilogram of uranium from the United States, South Africa and Belgium (140 Swedish Krona (SEK) / kg) was far below the cost of uranium mined at Ranstad (238 SEK / kg).

²³ The first US-Swedish accord, *Agreement for Cooperation Between the Governments of the United States of America and the Government of Sweden Concerning Civil Uses of Atomic Energy*, was signed on 1 July 1955 and approved by President Eisenhower on 27 July 1955. Agreements like this one were permitted under the terms of the Atomic Energy Act of 1954 which established the parameters for nuclear cooperation between the United States and other countries.

²⁴ As shown below, the Swedish military was prepared to engage in a diversion scheme to shield Sweden's bomb program from American inspectors.

²⁵ Christer Larsson, "Historien om en svensk atombomb, 1945-1972," *Ny Teknik*, April 1985, 57-78.

²⁶ *Kärnladdningsgruppens betänkande*, D4.

in 1962, “It is worth noting from a research perspective that we should be able to obtain plutonium for research purposes from the Ågesta reactor without American inspection.”²⁷ In addition to plutonium produced in Sweden, small amounts of weapons-grade plutonium were imported from England (1957) and from France (1960).

As shown in Tables 1 and 2, the Supreme Commander in 1962 also prepared cost projections for the production of weapons-grade plutonium and for the production of 100 nuclear warheads. There is no evidence that cost considerations were paramount in this planning; rather, the tone of the document is straightforward, suggesting a “if you want nuclear weapons, here’s how much they will cost” attitude.

Sweden’s nuclear weapon design resembled the American Trinity and Nagasaki weapons, which contained a plutonium core and relied on the so-called spherical implosion detonation method. The spherical implosion method uses a hollow core of plutonium that must be crushed by a perfectly symmetrical shock wave generated by conventional explosives. (This is in contrast to the “gun barrel” method, which relies on a mass of enriched U²³⁵.)²⁸ The use of plutonium in the “gun barrel” method was rejected by American designers after 1944, when researchers learned that the assembly of plutonium containing over 10 percent of the Pu²⁴⁰ isotope in the “gun barrel” method entailed a profound danger of predetonation due to spontaneous fission within the mass of plutonium. The only way to eliminate the danger of predetonation was to construct a plutonium bomb using the spherical implosion method. According to Glen Seaborg, the American scientist who discovered plutonium and was part of the Manhattan project, a plutonium bomb is cheaper but more difficult to construct, while the uranium bomb is more expensive but relatively simple to design and construct. Swedish designers perfected and tested both the implosion technology and the high-speed camera techniques required to monitor tests of the conventional explosive.

Nuclear Planning

The Swedish military funded and participated in weapon research and prepared plans for the deployment and use of nuclear weapons. A 1955 RAND report summarized the degree to which nuclear weapons affected Sweden’s military planning in the following way. Swedish military journals, the report noted,

have consistently given considerable attention to the development of atomic weapons.... In general, therefore, it is correct to assume that there is no playing down of the significance of atomic developments in the evolution of the art and science of warfare in general.

²⁷ *Kärnladdningsgruppens betänkande*, D8.

²⁸ The spherical implosion method and design line were also chosen by the Chinese.

Tables 1 and 2.

**Table 1. Projected Costs of Plutonium Production*
(SEK Million/Year)**

	Reactor Producing Pure Pu	Marviken: Aluminum Containment	Marviken: Zirconium Alloy Containment
Yearly Pu ²⁴⁰ costs including interest and depreciation	84	138	160
One-time Start-up Costs	378	40	--
Yearly Operational Costs (minus interest and depreciation)	51	--	--

*80 kg/year - projected output, 2% Pu²⁴⁰

Table 2. Projected Costs for Producing Nuclear Weapons (SEK Millions)

	Reactor Producing Pure Pu	Marviken: Aluminum Containment	Marviken: Zirconium Alloy Containment
Costs Incurred Before the First Weapon Is Produced	420	80	40
Costs for the Production of 100 Weapons	560	1430	1650
Total	1000	1500	1700

Swedish military writers, the report continued, were “keenly interested” in nuclear matters, “not only by reason of their general interest in technological advance,” but, more especially, because of three additional factors related to Sweden’s unique strategic situation:

- (1) [Swedish planners] must watch every move of the great powers which hem them in—a hemming-in which is partly self-induced on account of the alliance-free policy, but would in any case be unavoidable, they think, on account of their exposed position on the Scandinavian peninsula and the eastern shore of the Baltic;
- (2) They do not believe it improbable that within the future they may be able to produce atomic weapons themselves; and
- (3) They realize that the defense of Europe may well involve the use of atomic weapons in a war in which they would almost certainly become involved sooner or later.²⁹

Swedish military analysts were as interested, if not actually more interested, in the tactical implications of nuclear weapons. As early as 1952, many Swedish analysts accepted the view that nuclear weapons had not changed the fundamental underpinnings of the strategic competition between east and west. A consensus was forming around the belief that a nation with a strong conventional defense would be able to withstand an atomic attack and hold on long enough for another nuclear power to become involved in the war. It comes as no surprise, therefore, that analysts focused on the tactical implications of nuclear weapons, since Sweden’s role presumably would be to wage a tactical battle until the United States stepped in with strategic forces. Swedish planners thought in terms of a single threat to national security. The Soviet Union was the only plausible potential enemy, and Swedish nuclear weapons were to be deployed in order either to deter the USSR or to smash an invasion fleet before it could reach the Swedish coastline. Swedish nuclear weapons were thought of as a prelude to a US-Soviet confrontation in which Sweden would provide a wide range of operational support to the United States and to its NATO allies. Swedish planners assumed that Swedish weapons would be integrated into the western alliance or, failing that, used by the national command authority as a way to attract support from the west in the event of a Soviet invasion.

Swedish military analysts quickly proved to be keen students of western (primarily American) strategic thought. The vocabulary and reference points used by

²⁹ James J. Robbins, *Recent Military Thought in Sweden on Western Defense* (Santa Monica, CA: RAND Corporation, RM-1407, 25 January 1955), pps. 85-6. Several of the articles published in Swedish military journals in the 1950s cited in this study appear in the Robbins report.

military analysts reflected the absorption of western views on nuclear weapons. *Atomic Weapons in Land Combat*, one of the first studies in the United States on the subject, was reviewed in *Ny Militär Tidskrift* (*New Military Journal*) in 1953. *Atombomber och radiologiska stridsmedel* (*Atomic Bombs and Radiological Weapons*) was published in Sweden in 1953.³⁰ Representative of the military's interest in the tactical aspects of nuclear war is the article, "Atomic Weapons and Invasion Defense," published in *Ny Militär Tidskrift* in 1954. The author, Captain S. Ahnfelt, wrote, "The new weapon represents to a high degree the basic principles always striven for in modern warfare: *surprise, concentration of power, and rapid effect.*" One year before, Captain Ahnfelt had written in the same journal, "In the years just after the A-bomb was dropped on two Japanese cities, there was a general tendency to regard the new medium of mass destruction as a strategic weapon almost exclusively."³¹ Ahnfelt went on to discuss "with the greatest interest ... the work of the two American officers," who had published an assessment of the implications of nuclear weapons for land warfare. Similarly, the sources cited in one article concerning strategic theory published in 1954 reflected the author's familiarity with game theory and operations research, and included several standard works by American authors.³²

By the late 1950s, Sweden's nuclear program had achieved significant advances. Reactors, intended to provide an indigenous source of plutonium, had been constructed, and detailed cost projections for plutonium and weapon production calculated. Swedish weapon designers had perfected implosion technology, while military strategists devised plans to prepare for the deployment and use of nuclear weapons. The only component lacking was a clear-cut political commitment to a full-scale production program.

The Politics of Nuclear Forbearance

While Swedish military planners may have been in step with trends in American strategic thought, they were increasingly at odds in their own country with the emerging political culture concerning nuclear weapons. Military analysts and professional military officers increasingly relied on a vernacular that was anathema both to the Swedish left (including the SAP) and incompatible with Swedish historical experience. The Swedish left, for example, eschewed the word "power," in part, because this was seen as a

³⁰ Militärlitteraturföreningen.

³¹ Capt. S. Ahnfelt, "Atomic Weapons and Land Warfare," *Ny Militär Tidskrift*, No. 11, 1953.

³² Capt. Yngve Roloff, "Strategy and Poker," *Kungl. Krigsvetenskaps Akademiens Handlingar och Tidskrift*, No. 3, 1954. Sources cited include the following: J. Von Neumann and O. Morgenstern, *Theory of Games and Economic Behavior* (Princeton, 1944); J. Von Neumann, "Zur Theorie der Gesellschaftsspiele," *Math-Annalen*, Vol. 100, 1928; *Bulletins of the American Mathematical Society*; *Annals of Mathematics Studies: Contributions to the Theory of Games*, Vols. I and II (Princeton, 1950, 1953); J.C.C. McKinsey, *Introduction to the Theory of Games* (1952); *Air University Quarterly Review*, Summer 1950; Gen. Mark Clark, *Calculated Risk* (London, 1951); U.S. Naval Institute *Proceedings* (1954); C.S. Forester, *The Cruiser*; J.M. Keynes, *A Treatise on Probability*; *Anti-Aircraft Journal*, May-June 1953; N. Macciavelli, *The Prince and The Art of War*; Morse and Kimball, *Methods of Operations Research*; *Journal of the American Society of Naval Engineers*; Charnes, Cooper, and Henderson, *An Introduction to Linear Programming* (New York, 1953); Clausewitz, *On War*; *Fortune* (March 1951); *Aviation Age*; Wm. Roscoe Livermore, *The American Kriegsspiel: A Game for Practicing the Art of War* (1882); A. P. Wavell, *Soldiers and Soldiering*.

manifestation of so-called “great power arrogance.”³³ The word also harkened back to the grim days of the Great Power Era. As noted previously, whenever Sweden had played the “great power game,” the consequences had been terrible. Even those nostalgic for Sweden’s Great Power Era acknowledged Sweden’s tremendous losses in the European “power game”—empire, national treasure, tens of thousands of lives, and any aspiration to repeat the experience. Schooled in the literature of American strategic thought and analytical techniques, the Swedish military had developed a strategic culture that contrasted sharply with the ideologically-inspired culture of the Swedish political leftists. The country that took nearly a century to accept the potato and that harbored suspicions of imported intellectual capital was not about to embrace—either enthusiastically or unquestioningly—a foreign concept of deterrence that relied on an open discussion of state power.

Swedish planners' familiarity with western concepts and vocabulary distinguished Swedish nuclear strategists and planners from their party political compatriots as well. In a democratic political system, nuclear weapon programs must be supported by politicians if they are to be sustained. Swedish politicians did not take on the strategists in a public debate—or even in private as far as anyone now knows. Instead, the anti-nuclear weapon faction in the government began to take its ideological case against nuclear weapons to the general public through party newspapers and speeches. On the international stage, it launched a series of initiatives intended to establish firmly Sweden's anti-nuclear credentials. Without a plan to influence public opinion in their favor, the pro-nuclear strategists and planners were destined to lose the fight.

Atomic Bombast

Swedish officials often have described their foreign policy as unique. No other nation, for example, has asserted the right to define the content of “neutrality,” even though the concept has been part of the international legal framework for centuries. In order to support such an idiosyncratic foreign policy, moreover, Swedish officials gradually developed an equally idiosyncratic vocabulary. In the same vein as their Marxist brethren in Moscow, who appropriated the meaning of words such as “peace” and “democracy,” Sweden’s Social Democrats began to use words and phrases such as “solidarity,” “security policy hegemony,” “active neutrality,” and “marginal attack” to describe their defense and security policy. In many instances “neutrality speak,” at least initially, had no resonance outside of SAP circles or even within the Socialist International. Members of NATO used the word “solidarity,” for example, to refer to the willingness of democratic nations to accept risks in defense of shared principles of freedom and democracy. In “neutrality speak,” the same word connoted some sort of agreement among socialist or socialist-governed nations. Over time, however, the SAP

³³ The limited vocabulary of the Swedish language makes it difficult to distinguish “power” from “force,” for example, since both are translated as *makt* or *styrka*. In addition, there is only one word in Swedish for “policy” and “politics” (*politik*), though it is increasingly common to hear Swedes using the word “policy.”

taught Swedes a lexicon that isolated them from the exchange of ideas among NATO nations and virtually assured that military planners would remain a minority in their frame of reference for thinking about nuclear weapons. A more stark contrast between the vernacular of the military and that of the policymakers could hardly be imagined.

In international fora, political leaders also took great pains to project an image of Sweden as an ardent supporter of arms control and disarmament. Sweden's public stance on nuclear issues was keyed to the policy of "nonalignment in peacetime with the intent to remain neutral in the event of war." For over two decades, the Swedish government championed the cause of disarmament. It created a cabinet post for a Disarmament Secretary, who, more often than not, proposed measures that focused on nuclear weapons or other systems not in the inventory of Sweden's armed forces. Sweden's efforts were directed at the great powers and at the Warsaw Pact and NATO nations. Sweden sponsored proposals for a nuclear-free zone in the Nordic region, yet consistently excluded from these proposals territory in the region where Soviet nuclear weapons were located. Many of the Swedish initiatives surfaced in various parts of the UN organization, but none were implemented by the great powers. Moreover, many of the proposals for nuclear arms, if implemented, would have had a disproportionate impact on Western security interests. Proposals aimed at reducing conventional forces were also put forward, such as the effort in the 1980s to create a "tank-free" corridor in central Europe. The conventional arms control measures proposed by the Swedes had no more impact on the conduct of the great powers than their nuclear arms control initiatives, but underscored Sweden's public commitment to East-West arms reductions in Europe.

Reports that would cause others to question Sweden's commitment to nuclear arms control were suppressed. After the Swedish military prepared preliminary plans for the most effective use of nuclear weapons, in the event that Sweden were one day to acquire them, the Swedish Foreign Office, assisted by the Ministry of Defense, went to great lengths to conceal the fact that such planning existed. During the years when the acquisition question was under discussion, for example, Sweden's defense minister assigned General Aarman the task of ensuring that no "unsuitable" information about Sweden's plans or activities appeared in the press. After an Army plan for the use of nuclear weapons was written, Stig Wennerström, a Soviet spy who had been instructed by his Soviet masters to pay attention to Swedish developments and attitudes toward nuclear weapons, was ordered to review the document; the Army plan, he later explained under interrogation, contained "regulations and instructions on how Swedish military chiefs should use atomic weapons in various situations in case such weapons were available." Wennerström's report to General Aarman, which was forwarded to the Defense Minister, resulted in a Foreign Office instruction to retrieve the publication. Aarman ordered the destruction of the document, and the "whole edition was stopped and

burned and later it was reprinted and these regulations were not there or at least modified in some way."³⁴

In fact, the proposals advanced by Sweden established the country's anti-nuclear credentials at minimal risk to its national security interests. Since the end of World War II, the Swedish government had pushed a number of international arms control initiatives that shared at least one common feature: none of the Swedish initiatives, if implemented, would have had any effect on Sweden's armed forces or international arms sales. Proposals for tank-free corridors, nuclear-free zones, weapon freezes, and the like were aimed at NATO and the Warsaw Pact. The Swedish government's arms sales, even those banned by Swedish law, flourished during this time.

More to the point, however, these proposals did nothing to undermine Sweden's tenuous hold on what its leaders believed to be a US nuclear guarantee. High-ranking Swedish defense officials assured Washington audiences that, in contrast to the government's anti-nuclear rhetoric, Sweden's security policy rested on the assumption that Sweden continued to be protected by NATO's nuclear umbrella.³⁵ Swedish defense planning during the Cold War assumed that the American nuclear umbrella extended to western Europe guaranteed Sweden's security in the same way that the American commitment guaranteed the security of NATO members near Sweden.

This unshaken confidence in US nuclear assurances contrasted sharply with the strident rhetoric directed at the United States. The anti-nuclear and often anti-American nature of Sweden's approach to arms control was considered by American officials to be hypocritical, particularly in light of Sweden's self-proclaimed status as an American protectorate. Indeed, the United States and Sweden came close to severing diplomatic relations in the late 1960s.

The most significant deterioration in the history of US-Swedish relations coincided with Olof Palme's career in the Swedish government. On November 18, 1963, Palme for the first time became a member of the Swedish government as Minister without Portfolio. Within two years, Palme had already exerted considerable influence over the conduct of Sweden's foreign policy. Palme and Sverker Åström were instrumental in keeping Sweden out of the Common Market, for example, on the grounds that membership would be perceived as a sign that Sweden wanted to join NATO. Palme was also decisive in staking out positions independent of the United States. In February 1968, Education Minister Palme led a torch-light parade in Stockholm with the North

³⁴ *The Wennerstroem Spy Case—How It Touched The United States and NATO: Excerpts form the Testimony of Stig Eric Constans Wennerstroem, a Noted Soviet Spy*, U.S. Congress. Senate. Subcommittee to Investigate the Administration of the Internal Security Act and Other Internal Security Laws for the Committee on the Judiciary (Washington, DC: Government Printing Office, 1964), 71.

³⁵ This point was subsequently borne out in an official inquiry into Sweden's military cooperation with NATO during the Cold War. Betänkande av Neutralitetspolitikkommissionen, *Om kriget kommit...Förberedelser för mottagande av militärt bistånd 1949-1969* (Stockholm: Ministry of Defense, SOU 1994:11)

Vietnamese Ambassador to Moscow. In 1970 Palme visited the United States without an invitation, the first head of government to do so without meeting the President since Fidel Castro came to the UN in 1959. Over time, Palme, like Undén, came to personify Sweden's foreign policy. Eventually his name became an adjective to describe Sweden's foreign policy.³⁶

Independence at America's expense had tangible consequences. In late 1972 the United States withdrew its ambassador from Stockholm. In December, after Palme compared the American bombings of Vietnam to Nazi extermination camps, Secretary of State Kissinger, who said the United States did not have to establish its anti-fascist credentials, reminded Palme of who had fought against Nazi Germany (America) and who had sold the Nazis ball bearings during World War II (Sweden). President Nixon, for his part, rewarded Palme with two years of diplomatic isolation, which are now referred to in Sweden as the "Years of Frost." All the while, however, Swedish officials continued to count on the American nuclear umbrella as the cornerstone of Sweden's security policy.

A series of American ambassadors to Stockholm and other officials responsible for dealing with Sweden on a bilateral basis gradually accepted Swedish rhetoric as a cost of doing business. As Ambassador Rodney Kennedy-Minott observed, even when Olof Palme was most critical of the United States, military and intelligence cooperation between the two countries was not seriously affected. The substance of the bilateral relationship was strong enough to endure even the harshest and, in the view of Ambassadors Matthews and Butterworth, somewhat hypocritical, Swedish bombast concerning the role of nuclear weapons in the defense of Europe.

Over time, the highly-visible arms control and disarmament rhetoric that successive Swedish governments served up in opposition to nuclear weapons created emotional and moral standards that Sweden's unpublicized nuclear program clearly contradicted. The official anti-nuclear rhetoric was, for the better part of the Cold War, largely hypocritical and, by the admission of Swedish officials, offensive to other countries. Some Swedish officials were aware of this. As Bo Eriksson, spokesman for the Swedish Ministry of Defense, observed in 1985, "Lots of people hate the Swedes. They think we're a pain in the ass, always bragging at non-proliferation conferences and arms control negotiations."³⁷

The Freedom of Action Line

While the Swedish government trumpeted the cause of East-West detente and disarmament, it continued to sustain an extensive nuclear research program. In fact, nuclear weapon acquisition remained an unsettled issue in Sweden for nearly 20 years.

³⁶ *Den undénska linjen* and *den palmeska linjen* are common terms in the domestic Swedish foreign policy debate.

³⁷ Karen deYoung, "Swedish Officials Defend Atomic Research," *Washington Post*, 5 May 1985.

The reason for this is the SAP's policy of "deciding not to decide." In 1957 the SAP indicated that a decision on whether to produce nuclear weapons could be made in 1958, when Sweden was expected to have the economic wherewithal to go ahead with its own experiments. As usual, an effort was made to reach a consensus position outside of Parliament. In an attempt to reach a broad political compromise, Sweden's four noncommunist party leaders met in 1958 to set a common policy on nuclear weapons. They did not reach an agreement.³⁸

One year later, when the economic conditions were favorable to a production decision, the SAP government continued to hedge. It instructed the Defense Research Council in 1958 to:

study the factors and make the investigations necessary for gaining knowledge of the effects of various kinds of nuclear weapons and the possibilities of their technical use in war; also to establish methods and equipment necessary for civilian and military protection against nuclear weapons.³⁹

The instructions spelled out clearly, however, that, "research directed at creating a technical and economic basis for production and testing of nuclear weapons [was] not to be engaged in."⁴⁰

Under the SAP's new instructions, research was restricted by the ambiguous guideline that no atomic weapons were to be produced without the government's explicit authorization. This restriction only complicated research, however, since it was impossible to define the line that would have separated permissible from impermissible research. There were no objective out-of-bounds markers in the nuclear weapon research program organized by the Swedes. The analysts of the National Defense Research Institute (FOA) highlighted this dilemma in a 1958 study:

Findings that would be valuable for the subsequent production of a Swedish nuclear weapon are an inevitable by-product of the Protection Project. In general it is hardly possible to draw a precise line that separates Protection research from research that is intended to produce atomic weapons.⁴¹

³⁸ The extent to which Soviet opposition to a Swedish weapon influenced Swedish officials is not known. Prior to the meeting, *Pravda* had lectured Stockholm that a modern nuclear defense was incompatible with neutrality, but it is unclear whether Swedish decisionmakers were swayed by the Soviet warnings.

³⁹ Cläes-Göran Hedqvist, *Kärnvapenrelaterad forskning i Sverige 1945-1985* (Stockholm: FOA, 23 August 1985), 4.

⁴⁰ *Ibid.*

⁴¹ *Ibid.*

If Sweden were to maintain its know-how indefinitely, while politicians insisted on deciding not to decide, extensive research could still be done in all important areas. The research required to fulfill the political objective—to shorten the time between a production decision and deployment—would look, in FOA's view, very much like a production program.

Thus, Sweden's *handlingsfrihet* line—the decision not to decide, coupled with production-related research with no authority to produce—was, for all intents and purposes, a nuclear weapon production program. Political restrictions on basic scientific research in this case were both an open invitation to researchers to pursue weapon-related studies as well as a recipe for misperception from abroad. To make some sense of the political guidance, FOA gave the parliamentary decision of 1958 a strict interpretation. Under FOA's interpretation, “research that obviously is of great value for protection against [the effects of] nuclear weapons, yet is also of critical importance for the eventual construction of nuclear weapons” consequently was not undertaken.⁴² To skeptics, this approach was little more than a rhetorical fig leaf or a distinction with no difference. Sweden's researchers were formally forbidden to cross the line into “research explicitly intended to result in the construction of an atom bomb,” which left open for interpretation what one actually meant by “construction.” Consequently, Sweden increasingly resembled a nuclear weapon state, regardless of any claims to the contrary.

The growing gap between Sweden's declared non-nuclear status and its emerging nuclear capability gradually became irreconcilable both at home and abroad. The split within the SAP over the acquisition issue became increasingly acute. In 1959, when an official group of Sweden's defense experts examined the nuclear weapon issue in *Swedish Atomic Weapons? Six Experts' Essays*,⁴³ the official party organ *Tiden* and the semi-official paper *Morgon-Tidningen* took opposite sides on the meaning of the report. The SAP leadership was anxious to find a way to avoid a split that would seriously weaken the party. Toward that end, the SAP's Atomic Weapons Committee report arrived at a set of recommendations and conclusions that both sides claimed supported their views. On the one hand, the committee's decision to defer a final decision until 1962—further evidence of the freedom of action line—was consistent with Defense Minister Sven Andersson's “veiled hint that Swedish public opinion is being conditioned to accept an eventual decision in favor of nuclear weapons for the Swedish armed forces.”⁴⁴ Further reflecting the influence of those who wanted to retain a nuclear option, the SAP report recommended that “Sweden's present research program concerning protection against atomic weapons ... be expanded into areas in which it is ‘inevitable’ that a ‘by-product’ will be ‘findings of importance into possible production of a

⁴² *Kärnvapenrelaterad forskning*, 4.

⁴³ Stockholm #1008 to State (Official Use Only), 14 April 1959. 758.5611/4-1459. Included in this cable is a copy of Per Edvin Sköld, *Svensk atomvapen* (Stockholm: Tidens förlag, 1959).

⁴⁴ Stockholm #226 to State (Confidential), 30 September 1959. 758.5611/9-3059

weapon.”⁴⁵ In a similar vein, committee member Bo Siegbahn, a Foreign Ministry official who favored atomic weapons for Sweden, was quoted by the *New York Times* “as stating that the practical result of the decision is ‘to give the Swedish military virtually the atomic weapon research it asked for in October 1958.’” Leftist SAP factions, in contrast, took succor in people such as Inga Thorsson who “said that neither she nor Foreign Minister Undén (both members of the Committee) would have approved the report if there had been a ‘change in the objectives of the research.’”⁴⁶

The military, for its part, concluded that the “freedom of action line” had reduced the time between an official go-ahead and deployment. Encouraged by the SAP’s equivocation, the Swedish military continued with nuclear weapon planning based on a disciplined, analytical approach firmly grounded in the cutting-edge literature and the techniques familiar to planners and analysts in the United States and western Europe. The military, particularly the Air Force, also continued to press the case for nuclear acquisition. In January 1962 Supreme Commander General Torsten Rapp requested authority to look into the problems associated with the acquisition of nuclear weapons. This was a straightforward “repetition justification for nuclear weapons” that was thought to be a “careful plan by a new Supreme Commander to bring the government to approve nuclear production in 1963 (in absence of an international ban).”⁴⁷ Occasionally, the Swedish military based its argument on threat scenarios, something the politicians never did, at least never in public. The Soviets sharply criticized Rapp for having made it clear that the Soviet Union was the only possible threat to Sweden’s security. Rapp, according to a lecture in *Izvestia*, had forgotten that the USSR had “saved Sweden from Nazi occupation,” among other things.⁴⁸

Nuclear weapon proponents, however, found themselves increasingly isolated. Two decades of debate and research, plus the changed international climate, had begun to take a heavy toll on the initial enthusiasm for nuclear weapons within public and professional circles. By 1965, neither the strategic rationale nor the political momentum in support of nuclear weapons could withstand the combined opposition of the SAP’s leadership, the party’s left wing, which was crucial to the party’s hold on power, and strategic analysis, which pointed up serious liabilities in the weapons that had once been considered to be the ultimate force multipliers. As one observer concluded, over the decade of the 1960s, “political support for Swedish nuclear weapons gradually evaporated. Military analysis followed closely in the same direction.”⁴⁹

⁴⁵ Stockholm #350 to State (Official Use Only), 24 November 1959 758.5611/11-2459.

⁴⁶ Stockholm #A-751 to State (Secret), 10 May 1965.

⁴⁷ Stockholm #463 to State (Confidential), 22 January 1962 758.5611/1-2262.

⁴⁸ *Ibid.*

⁴⁹ Nils Andrén, “Neutrality, National Defense, and International Security,” Paper delivered at the conference, “Stability and Change: Assessing Europe’s Neutrals,” Wilson Center for International Scholars, Washington, DC, 19-21 November 1986, p. 13.

The Social Democrats also worked hard, however, to swing Swedish opinion away from nuclear weapons. In 1957, Swedes favored the acquisition of nuclear weapons by nearly 2.5 to one (40 percent for, 17 percent against). There was even stronger support in the south, a traditional source of conservatism in Sweden. From 1957 to 1958, public support for nuclear weapon acquisition in southern Sweden actually increased 15 percent, to 57 percent. This support is explained, in part, by the tendency of southern Swedes (Skanians) to favor a stronger national defense than their countrymen in other regions. Yet, like their compatriots, the Skanians also tended to be skeptical of moves that appeared to involve Sweden in what was perceived as a potential fight between two other powers. By 1967, the government had successfully turned the public against a Swedish bomb, in part by depicting nuclear weapons as an invitation for Sweden to be included in an East-West war that may or may not have been in Sweden's interest to fight. Those opposed to nuclear weapons now outnumbered supporters by 2.3 to one (69 percent opposed, 30 percent in favor). The more than 50 percent shift in public opinion may be attributed, in large measure, to the government's efforts to encourage a negative attitude towards nuclear weapons among the Swedish population. The government established in the public consciousness a link between non-nuclear defense and the traditional (and nearly sacred, by some estimates) policy of "nonalignment in peace" that would lead to neutrality in time of war. Nuclear weapons were described as an unambiguous threat to that time-honored policy. Once nuclear weapons were perceived as a threat to Sweden's prospects to remain aloof from the next war, support for nuclear weapon acquisition began to fade. This likely was a direct consequence of the government's efforts to create an anti-nuclear consensus among the public.

Opponents of nuclear weapons began to look to the UN for a formula that would offer Sweden the opportunity to forego acquisition in the name of international law. In June 1963, Prime Minister Tage Erlander informed American Ambassador James Parsons (1961-1967) of Sweden's interest "in a test ban agreement and full agreement with the US on avoiding proliferation of nuclear capability to other countries."⁵⁰ In that conversation, Erlander confirmed that Sweden "had the possibility of developing its own weapons rather quickly and quite easily." Erlander added, however, that there was neither the intent nor the desire to do so. Sweden's program, according to Erlander, was merely an option in the event that a non-proliferation regime were not devised. A critical indicator for Sweden would be whether the Federal Republic of Germany followed the French lead and acquired nuclear weapons. The Swedes hoped that events would decide the issue for them, eliminating the necessity of taking a position of their own. As the American Embassy in Stockholm reported at the time, "certainly one reason for Sweden's activity at Geneva and in disarmament debates at the UN is the hope that a

⁵⁰ Stockholm #A-1166 to State (Confidential), 15 June 1963.

great power agreement to end tests and put the lid on Nth countries will spare the Government from facing this issue.”⁵¹

Sweden’s projected and self-image as a significant role model for other countries contributed to the reluctance in some quarters to forge ahead with nuclear weapon acquisition. Swedish anti-nuclear ideologues viewed the world in terms of how Sweden could mediate between East and West and become a role model for other countries. The acquisition of nuclear weapons was incompatible with either role. Swedish Ambassador to Washington Gunnar Jarring informed the US Arms Control and Disarmament Agency of Erlander’s view “that if Sweden—a ‘good boy’—developed nuclear weapons, what could other states be expected to do?”⁵² Moreover, the explicit assumption in this approach was that by its own actions Sweden could eliminate its own geopolitical value, thus rendering Sweden an unattractive target to any potential aggressor. An independent nuclear capability would make it more, not less, likely that Sweden would be targeted in any East-West conflict, thus undermining Swedish security.

Closing the Gap

The policy of deciding not to decide could not be sustained indefinitely, for at some point research would cross the nuclear weapon Rubicon with or without political authorization. In the end, a Swedish nuclear weapon was unacceptable to the SAP and its supporters. In addition, the reality of Sweden’s nuclear weapon research had aroused international suspicion. When the domestic political climate could no longer tolerate the gap between the preferred image of Sweden and the looming nuclear weapon reality, the political will to acquire weapons vanished rather quickly. After careful analysis and great investment, Swedish officials concluded that the acquisition of nuclear weapons would not be in the national interest as defined by the preferred national myth. In order to bring policy on nuclear weapons into line with the preferred national image, the research program was retooled to reflect an interest in weapon technology with no authorization for weapon production. Marviken, the nuclear power plant slated to produce weapon grade plutonium for the production of weapons, is today a fossil fuel electrical power station. The research reactor R1, which was in a cavern beneath KTH, has been completely dismantled, and the cavern it once occupied, though decontaminated and made safe for new tenants, sits empty.⁵³

⁵¹ #A-1166.

⁵² Memorandum of Conversation. Participants: Gunnar Jarring, Ambassador of Sweden, Mr. William Foster, Director, ACDA, James Goodby, ACDA/IR, 19 June 1963.

⁵³ Because of concerns raised in the United States in 1994 concerning Sweden’s will to remain a non-nuclear weapon state, it is interesting to consider details concerning the fate of R1 and the way this nuclear weapon research facility was dismantled. Fredrik Lundeval, a Senior Research Engineer at KTH, provided the following summary of a report from the National Radiation Protection Institute, SSI-85-07. “R1 came into service on July 13, 1954. The reactor was shut down for the last time on June 5, 1970, after 16 years of service. In 1978, SSI asked the owner, AB Atomenergi, for a report on how the chamber would be decontaminated, sealed off, or whatever. AB Atomenergi, which by this point had changed its name to Studsvik Energiteknik AB, proposed in 1979 that the facility should be dismantled in 1981 or 1982, and toward that end requested 25 million kronor from the state to finance the project. Dismantling and decontamination took place between April 1981 and December 1983, followed by extensive radiation measurements made by the owner of the reactor as well as SSI. An SSI report from February 1, 1985 noted that ‘there is no radiation danger and from

The Swedish government's decision to join the signatories to the nuclear Non-Proliferation Treaty in 1972 coincided with the government's approval of the benchmark, ideologically-inspired, disarmament Defense Decision. While the Soviet Union was turning the nearby Kola Peninsula into one of the most militarized pieces of real estate in the world, the Swedish government's plan set a course that caused Sweden's defense spending to lag behind the NATO average, the Warsaw Pact average, and the average of Sweden's Nordic neighbors. Between 1972 and 1980 the number of interceptor wings, for example, fell from 22 to 11, while the number of infantry brigades fell from 20 to 10. By the early 1980s, some estimates showed that Sweden's defense capabilities had been reduced by at least one-half, if not more.⁵⁴ Sweden's confidence in the American nuclear umbrella must have provided insurance enough to justify disarmament in the face of such a tremendous military build-up so close to Sweden. The exact sources of Swedish confidence remain a mystery and this conduct was unique among Europe's democracies during the Cold War.

The evidence that Sweden had (and has retained) the know-how to build nuclear weapons is abundant. American specialists are convinced that Sweden could have produced a lightweight, efficient weapon more sophisticated than the American weapons dropped on Hiroshima or Nagasaki. One weapon specialist asserts that "the Swedes were also confident that their devices would have worked as planned, even without testing."⁵⁵ There is, however, no evidence that Sweden ever assembled a nuclear weapon or had the intention to do so.

The absence of a *production* program, however, should not be confused with the continuing existence of a nuclear weapon *research* effort. Sweden maintains an active research effort into nuclear weapon technology. During the 1981 "Whiskey-on-the-rocks" submarine drama, in which a Soviet submarine ran aground on Sweden's most sensitive naval base, an FOA specialist was able to determine through the collection of gamma emissions that the Soviet submarine U-137 was probably armed with nuclear torpedoes.⁵⁶ This demonstrated Sweden's sophisticated knowledge of weapon-related technologies. According to US intelligence sources, Swedish researchers are in constant

that standpoint the chamber is available for another appropriate use." Lundeval added, "It's a tidy but empty space. I have been down there a couple of times, but a lock has appeared on the door so nobody goes down there. There is a large reactor hall down there, maybe 15 meters high, with a four-story office space on one of the walls. The roof was painted blue (fake sky, maybe?), with a white checkered pattern. There is a crater in the floor, maybe five by five meters, where the reactor sat. A little cabinet for radiation tests is built into the wall. The experiment would be put in a little jar fixed to the end of a metal stave that was one half meter long and a decimeter thick. The stave would be inserted into the wall into a hole that was just the right size so that when the experiment reached the end, voilà, you had a radiation containment area. From the reactor hall there is a hallway with a control room and so forth. Out toward the main entrance there is a stairway. At the end of that two elevators (now turned off) go up to the surface, 21 meters away. It's somewhat spooky down there, even though the lights and water still work. I have no idea how the space will be used or if it will ever be used for anything again." Thanks to Henrik Nordström for providing Lundeval's remarks.

⁵⁴ McCormick, Gordon H., *Stranger than Fiction: Soviet Submarine Operations in Swedish Waters*, RAND R-3776-AF (1990), Santa Monica, Calif.; Ries, Tomas, "Soviet Submarines in Sweden: Psychological Warfare in the Nordic Region?" *International Defense Review*, no. 6 (1984); Agrell, Wilhelm, *Alliansfrihet och atombomben: Kontinuitet och förändring I den svenska försvarsdoktrinen 1945-1982* (Stockholm: Liberförlag, 1985).

⁵⁵ Peter Zimmerman, "Small but big enough," *Los Angeles Times*, 2 January 1991.

⁵⁶ Anders Hallberg and Anders Jörle, *Ubåt 137: Tio dagar som skakade Sverige* (Stockholm: Bokförlaget Atlantis, 1984).

contact with French weapon designers who grant access to French supercomputers so that Swedish researchers are able to test various weapon designs.

There would be formidable obstacles to a reversal of course, however. The acquisition of fissile material would be a significant issue. Studies by the Congressional Research Service and the US Arms Control and Disarmament Agency concluded that before Sweden could proceed with weapon production, major investments in reprocessing or separation facilities would have to be made, assuming, of course, that Sweden was unable to obtain sufficient fissile material through theft or purchase. In addition, before a production program could begin, there would have to be dramatic and readily detectable changes in Swedish defense policy.

Perhaps the most important barrier against nuclear weapon acquisition, however, is political. There would have to be a colossal shift in Swedish political life before any significant steps could be made toward the acquisition of nuclear weapons. Sweden's adherence to the Non-Proliferation Treaty is the law of the land. Every major political party is committed to a non-nuclear policy and the military has no delivery systems, storage facilities, or training for the use of nuclear weapons. In addition, Swedish governments have shown no interest in conducting nuclear diplomacy. On the contrary, Swedish policy is based on the assumption that its national interests are best served by a policy that combines technical competence and nuclear forbearance. Civil-military relations and the history of Swedish society, moreover, preclude the possibility of a clandestine nuclear weapon production program. Ingemar Dörfer, one of Sweden's most prominent defense and security policy specialists, has concluded, "The nature of Swedish politics and society is such that the idea of a Swedish nuclear weapon program, even a clandestine program, is simply absurd."⁵⁷ In addition, it is worth repeating that there is no credible voice in Sweden today advocating a change in Sweden's position.

Explaining Nuclear Forbearance

Nuclear weapon programs are started and stopped by politics. The technical solutions to bomb production were derived in the early 1940s. Sweden is no exception. The weapon research program and plans to produce and deploy nuclear weapons were stopped by politics rather than technological barriers.

It would be difficult to overemphasize the importance of ideology as a factor in Sweden's nuclear forbearance. The left wing of the Social Democratic Party, which increasingly dominated not only the party but the entire political landscape in Sweden in the 1960s, drove the agenda of the nuclear weapon debate. The US Department of State spent a considerable amount of time and energy sorting through the Marxist-sounding rhetoric of the Social Democrats, in an effort to identify socialists whose anti-nuclear

⁵⁷ Author's discussion, April 1987.

weapon actions paralleled declared Soviet foreign policy interests. Even though this group was rather large, American officials concluded that, by and large, with the exception of the Leftist Party Communists (VPK), the anti-nuclear sentiments of the Swedish left derived from woolly thinking rather than any conscious effort to carry water for Moscow.

The Social Democrats based their anti-nuclear weapon conclusions on ideological hypotheses, many of which were home grown. The SAP's thinking on nuclear weapons stood in stark contrast to the views of the Swedish military and conservative analysts, who discussed the utility of nuclear weapons in terms of national interest, deterrence, and the balance of power—concepts that were anathema to the socialists. As the party in power for most of the twentieth century, the Social Democrats increasingly described the nation's declared foreign policy in ideological terms that were incompatible with nuclear weapons in general and a Swedish nuclear weapon in particular.

The Social Democratic Party's policy and its anti-nuclear rhetoric drew strength and inspiration from a national *ethos* that was latently incompatible with nuclear weapons. Although, initially, some were persuaded that nuclear weapons could convey valuable technological or security benefits, history had also taught Swedes to be wary of acquiring the trappings and responsibilities of great powers. Nuclear weapons were a square peg in the round hole of Swedish society and there was no easy way to make the peg fit. Thus, the anti-nuclear faction of the ruling party had a relatively easy task to find images and metaphors that expressed a sense of "Swedishness" without reference to nuclear weapons; eventually, the SAP's anti-nuclear wing made these weapons the symbol of "anti-swedishness." In a highly homogenous society such as Sweden's, images that express "Swedishness" carry a great deal of social weight.

A pro-nuclear weapon campaign not only would have been difficult; if the ruling party had moved ahead with a production and deployment plan, the consequences could have been an implosion of Sweden's Social Democratic Party. Given the strength of anti-nuclear sentiment in its ranks and the growing anti-nuclear sentiment in the general public, the ruling Social Democratic Party determined that a decision to acquire nuclear weapons in the late 1950s to early 1960s would split the party and probably bring an end to the party's chances to govern. The left wing would have bolted from the party, tearing off a large piece of the middle as it went. Since such an overt political confrontation was antithetical to Swedish political tradition, it is no surprise that a back-room compromise was reached that gave every faction the feeling that it had won, in turn creating another conflict when the losers began to act like winners. The party produced a position paper on nuclear weapons that the anti-nuclear faction could point to as confirmation that its position ruled, while simultaneously the faction that favored leaving the option open used the same document as proof of the supremacy of its position. In the end, the party's left-wing prevailed. As Prime Minister Tage Erlander observed, "There was a time when I

thought Sweden should have nuclear weapons. But toward the end of 1957 I changed my mind after a long talk with Foreign Minister Östen Undén.”⁵⁸

The Social Democrats also concluded that Sweden could not afford a welfare state, nuclear weapons, and a strong conventional defense. Since the Social Democrats were committed to the welfare state, a choice had to be between nuclear weapons and conventional defense. In retrospect, there was no choice. Instead, the task for the party leadership was to find a way to wean the military, particularly the Air Force, away from nuclear ambitions, while simultaneously supporting a research program that could produce atomic warheads on relatively short notice as a hedge against an unlikely turn of international events. Olof Palme’s formulation of deciding not to decide, otherwise known as the “freedom of action line” (*handlingsfrihet linje*), legitimized the party’s left wing anti-nuclear faction, while sustaining research and gradually isolating the strategists and weapon advocates. By the late 1960s, therefore, the issue was the comparatively easy task of how to cut the budget for basic scientific research.

Swedish perceptions of the utility of small nuclear forces also shifted over time as well. By 1960, western analysts had concluded that the deterrent value of small nuclear forces was marginal, while the possession of nuclear weapons dramatically increased the risk that the small nuclear state would be a target in the earliest phase of an East-West war. By the mid-1960s, Swedish officials determined that the possession of nuclear weapons would ensure Sweden’s participation in the earliest phase of the next great war, i.e. the Soviet Union would be tempted to launch a pre-emptive strike on Sweden’s nuclear arsenal. Nuclear weapons, in short, were likely to be a war magnet, rather than the repellent preferred by Swedish authorities. In the Swedish view, the prospect of avoiding involvement in the conflict therefore would be more favorable without nuclear weapons. Since Sweden’s policy was to endeavor to stay out of war, regardless of the issues contested, the potential deterrent value of nuclear weapons was determined to be less than the risk of war implied by the possession of these weapons.

Swedish officials realized, moreover, that the acquisition of nuclear weapons would force Sweden to adopt a dramatically different approach to defense and foreign policy and would destroy the myth that the SAP had worked so hard to create. Although the Social Democratic Party claimed that it alone possessed the authority to define the operative content of the sacrosanct civil religion of “neutrality,” the reality of the East-West conflict caused Swedish officials to take into account the element of power in international politics even when this factor was eschewed for domestic consumption. The Soviet Union made it clear to Sweden that there was no such thing as a “neutral” nuclear weapon and that a nation that possessed nuclear weapons could not be “neutral.” Swedish officials were not prepared, in the end, to accept the responsibilities of great

⁵⁸ “Tanken på bomben övergavs 1957,” *Dagens Nyheter*, 6 May 1985. In the view of the American Embassy in Stockholm, Undén, a leader of the left wing anti-nuclear faction, was a confirmed Marxist whose ideological approach to politics favored Soviet interests.

power diplomacy associated with nuclear weapons, particularly in light of the Soviet threat.

Sweden's planners argued against the development of a national nuclear weapon capability on political-military grounds as well. Sweden did not need its own nuclear weapons, it was reasoned, because the effects of deterrence were random—all nations benefited from the low probability of nuclear war and the effects of deterrence. A former director of FOA wrote, "As a neutral state between the two superpower blocs Sweden is essentially protected by the so-called nuclear umbrella, roughly in the same way as the countries around it, regardless of the sphere of influence to which they belong. . . ." ⁵⁹ According to this logic, the United States was incapable of stating which nations were part of an American security sphere, because the geographic limits of any guarantee could not be controlled.

Consequently, for decades Swedish officials assumed, and in several instances claimed publicly, that the American nuclear guarantee to Europe (NATO's nuclear umbrella) extended to Sweden, further weakening the military rationale for a Swedish nuclear force. The empirical basis for such a belief is unclear. American planning documents from the era provide no clue, and thus far the reasons why Swedish officials were so confident in their assumption have not been revealed. One has little to go on beyond formulations such as Foreign Minister Östen Undén's remark that the United States would defend Sweden out of its own self-interest, regardless of Sweden's policies or actions. There is no evidence in the public domain to support Sweden's view of the American national interest, but the fact remains that several generations of Swedish officials shared the view that Sweden would be defended by the United States. ⁶⁰ They

⁵⁹ Martin Fehrm, "Sweden," in *Nonproliferation: The Why and the Wherefore* (Stockholm: International Peace Research Institute, 1985), 218.

⁶⁰ After more than one year of research into Swedish and American archives, a Parliamentary Commission concluded that the United States had been prepared throughout the Cold War to come to Sweden's aid in the event of a war. The Commission formulated the issues in the following way: "The decisive issue, naturally, was whether the Western powers—which meant primarily the United States—would have been prepared to provide the anticipated indirect assistance. No guarantees to this effect were forthcoming. What is known from available American policy planning, it seems the US was totally prepared to assist Sweden. Whether this American policy was known in Sweden at the time is a question that cannot be resolved." Yet the Commission provided no evidence beyond "it seems" to prove that the United States was prepared to assist Sweden in the event of a Soviet attack. The Minutes of NSC meeting number 439 (1 April 1960), cited as evidence of America's intentions, reveal that the NSC was uncomfortable with any policy language that could be interpreted as unilateral American support for Sweden. President Eisenhower, for example, repeatedly suggested that the entire question be deferred to NATO. Until that occurred, Eisenhower thought the reference to Sweden "should be omitted from NSC 6006 with the understanding that the Department of State would study the matter further and report back to the Council, particularly as to whether assisting in the defense of Sweden should be raised in NATO." (*Om kriget kommit*, appendix 10, p. 121. NSC 6006/1, *US Policy Toward Scandinavia (Denmark, Norway, and Sweden)* (Secret), 6 April 1960). The Commission makes it clear that the type of "assistance" expected from the United States would take the form of nuclear strikes against Soviet embarkation points in the Baltic. In light of the lukewarm treatment of Sweden in NSC 6006 and in NSC meeting 439, one is puzzled by the Commission's conclusion that, "If Sweden were attacked in the context of a general war in Europe, the USA would support and contribute to Sweden's defense against Soviet aggression. If Sweden were the object of isolated Soviet aggression, the USA would have been prepared to come to the nation's defense as part of a UN or NATO action." (*Om kriget kommit*, p. 13) The factual basis for such a strong conclusion appears to be, at the very least, inadequate. The US position expressed in these documents is certainly not strong enough to draw the conclusion that the United States was prepared to engage in nuclear war with the Soviet Union on Sweden's behalf. One can attribute this finding, in part, to the Swedish myth concerning the US commitment to the defense of Sweden. The question that remains unanswered is, why were Swedish officials so confident?

concluded that a Swedish nuclear force would be both redundant and risky. This belief reinforced the decision to abandon a national nuclear weapon force.

Conclusions

Nations have neither permanent friends nor permanent policies. The evolution of Sweden's decision to stop nuclear weapon research before the production phase should be seen in light of the doctrine of *clausula rebus sic stantibus*, which states that the obligations of a treaty are binding in international law only as long as the conditions prevailing at the time of the conclusion of the treaty continue to exist. In other words, Sweden has made no commitment to remain a non-nuclear state for ever and ever. The decision to forego the procurement of nuclear weapons was viewed as conditional and thus subject to reversal if international conditions changed. As State Secretary Karl Frithiofson said in the mid-1960s, "If the future be so unfortunate as to find nuclear weapons in the arsenal of small nations, the nuclear option will be considered in a different light, even by us."⁶¹ This view is consistent with the Swedish policy of reserving all options on national defense and foreign policy. Sweden's non-nuclear status, therefore, is more of a moratorium than a ban on weapon production. This policy, the product of decades of deciding not to decide, is referred to as the "freedom of action" line (*handlingsfrihet*). The "freedom of action line" is the essence of the Swedish decision.

For twenty years, Sweden sustained a significant nuclear weapon research program. After World War II, there was a general perception that nuclear weapons would be part of every nation's weapon inventory sooner or later. Sweden therefore sought to keep up with a perceived global trend and also to stay current with a new scientific field. As opposition to the acquisition of nuclear weapons began to build in the 1960s, the Swedish government adopted a dual policy intended to minimize the time between an official go-ahead and the day nuclear weapons would be available to the armed forces. This so-called "freedom of action" line was a decision not to decide, coupled with a vigorous research program consistent with the goal of weapon acquisition. Sweden could simultaneously engage in nuclear weapon research and plan to participate in an international non-proliferation regime; when the time came to decide, it could choose whatever path would be more favorable to the Swedish national interest.

The Swedish government finally determined in the late 1960s that it would not be in Sweden's national interest to acquire nuclear weapons. The formal parliamentary decision to refrain from the acquisition of nuclear weapons was announced in 1968. Later the same year, Sweden signed the Test Ban Treaty; in 1970, it signed the Non-Proliferation Treaty, confirming the fact that there was insufficient political will in Sweden to carry through a nuclear weapon acquisition plan. Once the decision was taken

⁶¹ "Historien om en svensk atombomb," 77-78.

to stop acquisition efforts, a scaled-back research program into the general principles of nuclear weapons was sustained. By the late 1960s, however, Sweden's nuclear weapon research program no longer had the goal of weapon production.

While no single factor is solely responsible for the end of Sweden's nuclear weapon ambitions, in general the program ended for reasons deriving from domestic Swedish politics and from shifting assessments of the relative benefits and risks of small nuclear forces. The ruling Social Democratic Party determined that a decision to acquire nuclear weapons in the late 1950s to early 1960s would have destroyed the cohesion of the party and probably signaled an end to the party's chances to govern as well. The Social Democrats understood, moreover, that Sweden could not afford to build a welfare state, nuclear weapons, and a strong conventional defense. A significant part of the SAP's opposition to nuclear weapons derived from ideology. Since the Social Democrats were committed to the welfare state, the choice had to be between nuclear weapons and conventional defense.

The Swedish perception of the utility of small nuclear forces also shifted over time. By 1960, western analysts shared the perception that the deterrent value of small nuclear forces was marginal, yet the possession of nuclear weapons dramatically increased the risk that a small nuclear state would be a target in the earliest phase of the next war. By the mid-1960s, Swedish officials concluded that the possession of nuclear weapons would ensure Sweden's participation in the earliest phase of the next great war, i.e. the Soviet Union would be tempted to launch a pre-emptive strike on Sweden's nuclear arsenal. Since Sweden's policy was to endeavor to stay out of war regardless of the issues contested, the potential deterrent value of nuclear weapons was determined to be less than the risk of war implied by the possession of these weapons. In the end, the reality of great power politics caused Swedish officials to take into account the element of power in international politics, even when this factor was eschewed for domestic consumption. The Soviet Union made it clear to Sweden that the acquisition of nuclear weapons would be incompatible with Sweden's neutrality. In the final analysis, Swedish leaders were not prepared to accept the responsibilities and risks associated with nuclear weapons.

The decision against nuclear production was further reinforced by a steadfast belief in a *de facto* US nuclear guarantee. For decades Swedish officials assumed, and in several instances claimed publicly, that the American nuclear guarantee to Europe (NATO's nuclear umbrella) extended to Sweden. Swedish officials claimed that the United States could not define the geographic limits of a political zone of influence, thus Sweden fell within the area of protection. In this view, a Swedish nuclear force would be not only risky but redundant.

In the end, the Swedish program was stopped by politics, not by a technology deficit. Moreover, in order to fully understand Swedish nuclear forbearance, both historical experience and political culture must be taken into account. If Swedes had

been successful in building an empire, for example, or perceived large weapon systems as a legitimate means to express national power and prestige, or if Sweden had not been governed by a party that professed to be unable to distinguish between the moral content of NATO and the Warsaw Pact, then the outcome of the nuclear weapon acquisition debate might have been different. But history did not develop in another way, and today Swedes have few "what if" questions to ponder. The nuclear weapon option was explored, considered in great detail at considerable expense and, finally, rejected. Today, there is a solid consensus in Swedish military, political, and academic circles that the country's security would not be served by the acquisition of nuclear weapons.

Appendix 1: A Brief Overview of Swedish History

This section presents a brief overview of some of the aspects of Swedish history that have shaped the view of the utility of weapons and national defense. It concludes with a brief discussion of two structural features that worked against the continuation of a clandestine nuclear weapon production program without political authorization.

Sweden's status as a European great power began to slip in the late 1690s. Fewer than twenty years later, the Swedish Empire was finished. Over the course of two days in June 1709, Sweden lost a battle with the Russians and a protracted war against central Europe that cost Sweden the ability to defend its frontiers and the territory that had been built up over nearly two centuries. From the moment that Russia's forces under Peter the Great smashed the Swedish army at Poltava, an inexorable decline in Sweden's importance as a European military power and in its value as a partner in coalition diplomacy and warfare began. For the Swedes, the competition for the age-old prize, *dominium maris Baltici* (sovereignty of the Baltic Sea) was over. Few imagined then that the destiny of Sweden, the country known as the Lion of the North, namesake of Russia, heirs of Gustav Adolph, and champion of the Reformation, would be to withdraw from global politics, guided by a foreign policy whose central object was to keep Sweden out of all wars, even those that threatened the values on which Swedish society was based.

In order to appreciate fully the social, political, and historical context in which Sweden's nuclear weapon research program took place, one must also have an awareness of the meaning and implications of what occurred in Sweden since the so-called Great Power era (1630-1721). The notion of coalition defense, particularly with Swedish forces under foreign command, is complete anathema. Throughout their history of participation in war, Swedes have been the commanders and strategists. In general, however, the relative value that potential allies and enemies have placed on Swedish territory and power has not equaled the Swedish assessment. The ethnic hubris that resonates, in part, from the Great Power era and Sweden's subsequent political-military isolation has resulted in a Swedish tendency to overestimate foreign interest in Sweden. During the closing days of the Napoleonic Wars, in the Crimean War, in both World Wars and throughout the Cold War, Swedish officials either perceived, or attempted to generate the perception, that Sweden was being actively sought as a military ally. This was done, at times, to attract Great Power interest while preserving the impression that Sweden was not exerting its interests and, at other times, to create a false impression for the Swedish public so that the government would appear to be steadfastly guarding Sweden's independence and freedom of action.

A common Swedish interpretation of the origins of NATO is that the United States and its allies applied "strong western pressure combined with clear threats" in

order to force Sweden into an alliance.⁶² In fact, representatives of the nations that created NATO agreed that no approach should be made to any prospective member that did not first express interest in joining the Atlantic Pact. The British insisted that Sweden “must join at her own instigation.” Ambassador Sven Dahlman, who directed the press and political sections of the Swedish foreign ministry in the 1940s, confirmed this account: “I do not recall [that] the US government put pressure on Sweden to follow Norway and Denmark into NATO.” Put another way, the perception of pressure was a convenience for Sweden’s leaders, who during the Cold War sought a way to avoid taking sides in public between east and west.

The reluctance to take sides between east and west reflects centuries of Swedish history. Taking sides in the past has only exposed Sweden to unacceptable danger. The “true international importance of Sweden’s part in history is rather that she has always stood, and still stands, in the gate between East and West.”⁶³ To maintain at least the appearance of distance from any great power competition, the SAP throughout the Cold War followed a declared policy of *lika både goda kålsupare*, an idiomatic expression meaning, more or less, “a plague on both your houses.” Swedes, like most people, tend to see world politics through the optic of domestic affairs, which suggested that all differences could be bridged by compromise and an acceptable middle way found between any two extremes. Swedish officials frequently opined to British diplomats that in the best of all worlds the western cart would be pulled by American power and steered by a British driver. In the Twentieth Century, Swedes frequently complained that American policy toward the Soviet Union was misdirected. Rather than confronting Moscow, which Swedes had failed to do successfully for centuries, America, it was said, should seek ways to reassure Soviet leaders. Sweden’s approach to Soviet affairs, which derived from a particular historical experience, often ran counter to the American approach.

Sweden’s self-imposed isolationism contributed to a cultural tradition that discourages the import of foreign intellectual capital, and intensified the linguistic barrier that has closed much of Swedish intellectual life to the outside world. It comes as no surprise, therefore, that Swedes have maintained for the greater part of this century that “outsiders,” particularly Americans, do not understand the origins of Sweden’s foreign and security policies. In conversations with their American counterparts, Swedish officials have asserted for at least a century that there is an inadequate appreciation or knowledge in the United States of the importance of regional factors in the formulation of Swedish policy. In the mid-1980s Nils Gylden, director of long-range planning in Sweden’s Ministry of Defense, frequently asserted that US policy toward Sweden’s security was not only “misinformed,” but that the Swedish Ministry of Defense had a better understanding of the true intent of US defense planning than did the National

⁶² Örjan Berner, *Sovjet och Norden* (Stockholm: Bonnier Fakta, 1985), 62.

⁶³ Michael Roberts, *Essays in Swedish History* (Minneapolis, MN: University of Minnesota Press, 1977), 12.

Security Council.⁶⁴ William Widgery Thomas, the American Minister to the United Kingdoms of Sweden-Norway under Presidents Arthur and Harrison, returned to the United States in the 1890s with the self-appointed mission of correcting American views on the “name and fame” of the Swedes.⁶⁵ Ambassador Freeman “Doc” Matthews (1947-1950), on the other hand, reported to Washington that Swedes were not concerned that Americans misunderstood their policy, as much as they were afraid that Americans, as Matthews often reported, would understand Sweden’s policy “all too well.”

A common theme in Swedish foreign policy is the assertion that foreigners cannot comprehend the degree to which concern for Finland’s interests shapes Swedish policy. For over 700 years Finland constituted an integral part of the Swedish nation. Swedish citizens from Finland served in the military carrying regimental banners named for Finnish cities, helped to colonize North America during the reign of Sweden’s Queen Kristina, and, for all intents and purposes, were integrated into Sweden. The eastern provinces of Sweden were lost in 1809 as a consequence of an ill-advised Swedish attack on Russia, which was paid for in lost territory and ended the Wasa dynasty on the Swedish throne. In the 1800s the widespread feeling in Sweden was that Finland had been lost through faulty leadership rather than a failure of military skill. Throughout the century Swedish bands played *Björnborgarnes March*, a tune so popular many thought of it as the national hymn. A Swede writing about the lyrics remarked:

It is one that every Swede loves, as it was played by the bands of the Swedish regiments in many a dreadful battle during the unhappy, though glorious war of 1808 and 1809 in Finland—where, in some thirty to forty degrees below zero, the Swedes, half naked and starved, fought like brave men, but the Government did not back the army, and that was the reason why, when the news came back to Sweden, we quietly deposed our King Gustav IV Adolph.⁶⁶

Until the end of the nineteenth Century, *revanchiste* thoughts, expressed in terms of a desire to regain Finnish territory, to reunite with Finnish brothers and once more do battle with Russia, known euphemistically as “the ancient enemy,” were a common feature of Swedish political life.

Neither revenge nor reunification with Finland were in the cards for Sweden. Oscar II (king from 1872 to 1907) was the last Swedish official to express, with any sense of credibility, a desire for the day “when Sweden with advantage and honor could again draw the sword against the ancient enemy.”⁶⁷ Finland was lost to Sweden forever,

⁶⁴ Mr. Glydén’s views were expressed to the author in several occasions in Washington and Stockholm.

⁶⁵ William Widgery Thomas Jr., *Sweden and the Swedes* (Chicago: Rand, McNally & Company, 1892).

⁶⁶ J. MacGregor, *The Rob Roy on the Baltic* (London: Sampson, Low, Martson, and Co., 1892), 157.

⁶⁷ Franklin Scott, *Sweden: The Nation’s History* (Minneapolis, MN: The University of Minnesota Press, 1978), 325.

first as a Grand Duchy of Russia in 1809, and then to independence and sovereignty in 1917.

Swedish officials asserted, in particular, that there was little understanding abroad of Swedish concern for Russian, and then Soviet, pressure on Finland in response to (or retaliation for) Sweden's policies and actions. During the Cold War, Swedish officials often referred to Finland as Sweden's security "alarm clock."⁶⁸ In the event that the Soviet Union moved the Iron Curtain "forward to the Gulf of Bothnia, 'If Finland were not Finland, then Sweden would be Finland.'"⁶⁹ In reality, particularly during the Cold War, the direct nature of the Finnish-American dialogue, and the degree to which the United States supported Finnish independence, was concealed from Swedish officials, as shown in material recently obtained from US archival sources. Some officials, such as George Kennan, argued against Sweden's membership in NATO out of concern for Soviet retaliation against Finland.⁷⁰ The Swedes nevertheless considered themselves to be guardians of things Finnish. This connection played a role in the presentation of Sweden's security policy. As late as 1990, an American who disagreed with the SAP's view of foreign policy was often discredited in the Swedish press for supposedly lacking an understanding of Sweden's sense of responsibility for Finland, which was expressed euphemistically as a lack of "proper understanding of the special Nordic circumstances."⁷¹ Whether Finns desired or appreciated Sweden's guardianship is a separate issue.

A sense of Nordic or Scandinavian identity at any rate has been an important factor in the evolution of the Swedish state and Sweden's national *ethos* and security policy. The current version of Sweden's national hymn "*Du gamla du fria*" ("You Ancient and Free"), which was originally "*Du gamla du friska*" ("You Ancient and Strong"), does not mention the name of the country; rather, Swedes sing, "Yes, I want to live/I want to die in *Norden*," a word which literally means "the North." When considering Sweden's evolution, one must bear in mind both national and regional history.

The ethnic, religious, and cultural homogeneity of Sweden, whose history is dominated by autocracy rather than democracy, is not always appreciated. Swedish society has been described as more Asian than European in some respects. American observers have been struck by the extreme reserve of Swedes, which is often marked by

⁶⁸ Peter Lyon, *Neutrality* (Leicester: Leicester University Press, 1963), 8.

⁶⁹ Karl Molin, "Winning the Peace," in Henrik Nissen, ed., *Scandinavia During The Second World War* (Minneapolis: University of Minnesota Press, 1983), 361.

⁷⁰ William Colby recalled that US Ambassador to Stockholm W. Walton Butterworth (1950-53) once said, "We get all of the cooperation with Sweden that we need. They don't have to join NATO. Anyway, Swedish membership would place Finland under Soviet pressure." This view was shared by British officials such as Sir Peter Tennant who remarked, "Why should we put pressure on Sweden to join NATO? If Sweden didn't want to join, so be it. Both East and West knew quite well that in the end it would be possible to frighten Sweden into doing whatever was wanted." See Paul M. Cole, "Neutralité du jour: The Conduct of Sweden's Security Policy Since 1945," The Johns Hopkins Nitze School of Advanced International Studies, Ph.D. dissertation, 1990.

⁷¹ Sverker Åström, "Undén ingen Mr. Hyde," *Dagens Nyheter*, 7 November 1990.

a polite façade, “their way of saying ‘yes’ even if they mean ‘no,’ their continual apologizing” and their repeated use of the word “thanks.”⁷² The Swedish negotiating and bargaining style, which is to achieve a consensus behind closed doors among a critical mass of influential people, works in Sweden, in part, because by the time a position is declared, one must stand out and oppose the status quo in order to challenge the consensus position.

⁷² Werner Wiskari, “A Difference in Pace,” *The New York Times*, 18 February 1961.