

**RECONCILING NEUTRALITY AND REALITY:
THE AMERICAN AND SWISS SCIENTIFIC ATTACHES
AND THE SWISS NUCLEAR ENERGY PROGRAM, 1963–1965¹**

The history of atomic arms control and sharing in Europe during the Cold War has most noticeably focused on the relationship between the United States and the European Atomic Energy Community (EURATOM). Established in 1957 along with the European Economic Community (EEC) in the Treaty of Rome, EURATOM was designed to foster cooperation among Western European nations for the financing, production, and distribution of nuclear power for peaceful purposes. During the 1960s, the US believed that cooperation with EURATOM would accomplish four important goals.

First, cooperation would ensure the *safe* transfer of nuclear materials such as plutonium to its allies in order to develop Europe's nuclear energy capacities. Second, collaboration would strengthen the North Atlantic Treaty Organization (NATO) alliance because Washington believed that nuclear cooperation should logically lead to closer political cooperation. Third, sharing nuclear power with European nations would encourage «competitiveness» between the traditional electrical power and nuclear power sectors and lead to increased productivity and hence lower energy costs. Lastly, and perhaps most importantly, sharing of peaceful nuclear technology would prevent the proliferation of nuclear weapons technology to the majority of European nations that did not possess weapons stockpiles. The Kennedy administration in particular wanted to transfer some of its stockpile of «fissionable material for use in weapons» to «peaceful purposes», not only to reduce the arms race between the US and the Soviet Union but also to prevent the loss of control of nuclear weapons technology that might lead to the development of an independent European nuclear force.²

¹ The views presented here are my own and do not necessarily reflect those of the US Department of State or the United States Government. I would like to thank my colleagues in the Office of the Historian for their generous and substantive comments on various drafts of this essay.

² See «Memorandum from the Acting Director of Arms Control and Disarmament Agency», March 14, 1962 and «Memorandum of Meeting with President John F. Kennedy», July 30, 1962, both in Department of State, *Foreign Relations of the United States 1961–1963, Volume VII, Arms Control and Disarmament* (Washington: Government Printing Office, 1995), pp. 386–388, 520–524 (hereafter FRUS). Kennedy and his advisers pondered the creation of a Multilateral Nuclear Force through NATO to prevent the Europeans from establishing an independent force. A year later, President Lyndon B. Johnson and his national security team reaffirmed this policy. See

At first blush, one would assume that Switzerland would not fall under this rubric. After all, Switzerland had prided itself on its political neutrality throughout the twentieth century. Nevertheless, the Swiss also wanted to reap the benefits of sharing nuclear technology for research and energy purposes with the United States. In fact, the US and Switzerland's cooperation on nuclear energy predates the creation of EURATOM. The two nations had established strong ties in the field of nuclear technology sharing with the signing of an Agreement in the Civil Use of Atomic Energy on June 21, 1956. The Agreement included provisions for the sharing of nuclear technology for research purposes as well as for the generation of power for peaceful purposes. Over the next nine years, the Agreement had twice been amended by mutual consent. By the winter of 1965, both Bern and Washington decided to renew the Agreement in anticipation of the impending expiration of the research agreement in September 1965 and the power agreement in January 1967.³

The Scientific Attaché at the Swiss Embassy in Washington, Jean-Jacques Rollard, handled the day-to-day negotiations with Charles W. Thomas of the Department of State's Bureau of International Scientific and Technological Affairs in 1965. These negotiations built upon the goodwill that Rollard's predecessor, Dr. Reinhold Steiner, had established with the Department of State during the amendment negotiations of 1963 and 1964. Meanwhile the American Scientific Attaché in Bern, Henri Bader, worked closely with the Swiss Government to renew the agreement. This paper examines how Steiner, Rollard, J. Murray Luck (Bader's predecessor as the Scientific Attaché in Bern), and Bader labored to maintain nuclear cooperation between the two nations and highlights the role of the Swiss and American scientific attachés in the making of Swiss-US nuclear policy.

The documentary evidence shows that as the cold war deepened, both Washington and Bern increasingly realized the importance of scientific research. Indeed,

«Meeting of the Committee of Principals», July 23, 1964, in Department of State, *FRUS 1964–1968, Volume XI, Arms Control and Disarmament*, pp. 92–93. For the competitiveness argument see «Memorandum from Myron Kratzer of the U.S. Atomic Energy Commission to Carl Gardner the Bureau of International Scientific and Technological Affairs», Department of State, November 21, 1962, RG 59, General Records of the Department of State, Records of the Bureau of International Scientific and Technological Affairs, Lot 67D132, Central File (1965), Box 6, IANEC 1962–63, Relationships, Nuclear Power Report of Sub-Group, 1962, National Archives. (hereafter BISTA, NA).

3 Switzerland, somewhat surprisingly, even figured in the cold war nuclear arms calculus. The Soviet Union said that Bern's refusal to eschew the building of its own nuclear weapons capability even after it signed the 1963 Limited Test Ban Treaty showed that it might convert peaceful nuclear technology into nuclear weapons. See «Memorandum of Conversation between Secretary Rusk and Soviet Foreign Minister Andrei Gromyko», December 5, 1964, *FRUS Vol. XI*, 129–32, and «Memorandum from Charles W. Thomas of the Bureau of International Scientific and Technological Affairs, Department of State to Kratzer», February 2, 1965, Box 8, General Policy 1965, AE – Atomic Energy (GEN.), AE 4 Agreements, Switzerland, 1965, BISTA, NA.

in 1961 Secretary of State Dean Rusk upgraded the position of Science Officers to Attaché status and assigned these diplomats to «posts at which science and technology are playing or will play a significant role. Science officers», Rusk stressed, were «integral parts of the Ambassador's staff at such posts.» Their duties included, advising the Chief of Mission on science and technology issues, «coordinating US scientific programs and activities» at post, «assuring that» American scientists understood «the foreign policy implications» of their activities, and assessing «significant developments and trends in science» at post, in particular those that could affect US interests. It logically followed that the Department treated the allied attachés with the same respect.⁴

The early 1960s were a challenging time for Switzerland as the traditionally neutral nation tried to navigate its way not only through the bipolar world of US–Soviet rivalry but also the new phenomenon of Western European integration. Bern wanted to stay neutral, yet take advantage of the trade opportunities afforded by participation in the European Economic Community (EEC). It was also increasingly determined to develop its scientific research sector. Indeed, between 1961 and 1963 the federal government's appropriations for overall scientific research rose almost 16%. This included a significant role in the development, along with the private sector, of the country's nuclear power supply. Increasingly, Swiss scientific and political leaders realized that they needed to develop some capacity for nuclear power in order to satisfy the growing demands of not only Swiss industry but, in particular, Swiss household use (not to mention the agricultural and service sectors, in particular tourism).

By 1963, as Attaché Steiner and the Swiss Government began to push for a closer relationship on nuclear sharing, Washington reiterated its concern that the export of nuclear materials such as tritium—a radioactive isotope of hydrogen used to boost the fission process in nuclear weapons (it is also used in such benign products as wrist watches)—be subject to the proper safeguards established by the US Atomic Energy Commission (AEC). In the spring, when two Swiss companies separately requested the export of 10'001 curies of tritium gas, A.A. Wells of the AEC reminded Steiner that US policy prohibited the dispersal of quantities of tritium in excess of 20'000 curies. While he recognized the value of cordial relations between the US and Switzerland, Wells explained that in order for the AEC to make an exception and approve the sale of these quantities, the Swiss would have to agree certain conditions. These included safeguards such as meetings between US and Swiss officials, periodic «visits to the appropriate» Swiss governmental and private research facilities by AEC personnel, and pledges that tritium and other materials be strictly used for «peaceful» purposes.⁵

⁴ «Telegram CW-4414 from Secretary Rusk to All Diplomatic and Consular Posts», November 22, 1961, BISTA, Box 3, Regional Conference – October 1962 – London, NA.

⁵ «Letter from A.A. Wells of the Atomic Energy Commission to Reinhold Steiner», April 19, 1963, BISTA, Box 5, Switzerland, NA.

Steiner replied on May 6 that his government «would prefer not to get involved in this special safeguard policy» but instead preferred «that the amount of undispersed tritium stays below the 20'000 curies limit at any one time.» Most importantly, he said the Swiss Government «guarantee[d] – and they will also exercise the necessary controls – that the 20'000 curies limit will not be exceeded in the future.» Steiner seemed to believe that he had solved the problem, but unfortunately confusion between the two governments continued. Wells wrote Steiner on the 31st that he regretted «that a misunderstanding» still existed over tritium transfers to Switzerland. The AEC, Wells informed Steiner, had decided to allow the transfer to the two Swiss companies, but only because he had received «your personal assurance that the Swiss Government will accept the United States safeguards rights to this material.» Steiner's position as a trusted emissary for his government proved invaluable in convincing the AEC to make this important exception to its policies. This is especially noteworthy given Washington's concern about safeguarding nuclear transfers to its NATO allies.⁶

Government support in Switzerland had, the spring of 1963, supplied half of the budget for the construction of the country's first experimental nuclear power plant at Lucens, and gave significant financial support the efforts of Switzerland's private nuclear industry to participate in «several cooperative international ventures having to do with atomic research.» The US Embassy in Bern reported that «political considerations» in Switzerland explained «to a large extent the Government's preference for atomic fuels over oil and coal as a substitute for water.» Since water was the country's primary natural resource, the Swiss believed they were «less subject to pressures from foreign sources of supply» of oil and coal and thus could «maintain its independence» with nuclear power rather than with traditional energy supplies. Swiss citizens also preferred nuclear power over oil or coal-based power because of environmental concerns, in particular the threat of air pollution from oil and coal.⁷

Throughout 1964, Steiner's relationship with both the AEC and the State Department only deepened. Meanwhile, Wells and the US science attaché in Bern, J. Murray Luck, began to explore the development of a long-term «collaborative science arrangement» between the two nations «along the lines of the present USA–Japanese cooperation.» Unique because of its government's unwillingness to provide much material and, especially, financial support for the sciences (as well as defense), Japan had nonetheless developed a small but growing private scientific

⁶ «Letter from Steiner to Wells», May 6, 1963, «Letter from Luck to Steiner», May 17, 1963, and «Letter from Wells to Steiner», May 31, 1963, both *ibid.* (emphasis mine).

⁷ «Airgram A-1069 from the Embassy in Switzerland to the Department of State», May 31, 1963, Department of State, Central Foreign Policy File, Box 4174, SCI 3, Organizations and Conferences, SWITZ (GE), UN, NA. (hereafter DOSCF), and Claude Zangger, «Energy Resources and Development», in J. Murray Luck, ed., *Modern Switzerland* (Palo Alto: The Society for the Promotion of Science and Scholarship, Inc., 1978), 55.

sector. Like the US, Western Europe, and the Soviet Union, Japan also possessed an industrial complex, and «an educational system capable of producing a steady supply of first-class scientists as well as technicians.» The financial aid provided by Washington gave an entrée into the fertile field of Japanese science without interference from the Japanese government.

Luck lamented, however, that even «under the influence of a few good drinks», his Swiss contacts in the scientific community did not like the idea. One contact said that many scientists believed that «giving still another job to the Federal Government was not acceptable to the Swiss mind.» While they were open to receiving federal funds, scientists preferred cooperation in scientific endeavors through non-governmental entities. Even a prominent physicist, Dr. Urs Hochstrasser, the Federal Council's Chief Delegate for atomic energy matters, who Luck originally believed would reject «the bogey of building the Federal Government into a too pervasive and too powerful organization», explained that a Japanese-type arrangement could endanger the Swiss conception of political neutrality. Indeed, Hochstrasser predicted that the Swiss would in turn «be obliged to propose in the interests of strict adherence to the concept of neutrality a similar bilateral agreement» with the Soviet Union. Luck quickly backed off and the idea died a natural death.⁸

Seemingly chastened, Luck tried a different tack with the Director of Zurich's water supply, Otto Jaag. Instead of highlighting scientific cooperation, Luck instead asked Jaag if the two countries could cooperate on general water issues such as hydrobiology and waste disposal. The Director replied that the Federal Government would indeed be open to strengthening cooperation between the two countries in this area. This again showed Switzerland's willingness to work with the US, but not to the extent that its hard-fought political neutrality was threatened, even though it needed Washington's help and expertise. There were limits, and as long as the US recognized these limits, the two would continue to cooperate in scientific and energy matters.⁹

Over the next two years, the Swiss Federal Political Department (the Swiss Foreign Ministry) continued to examine Switzerland's role in international affairs. Determined to maintain «an armed and permanent neutrality», Bern nevertheless wanted to participate in the economic prosperity most of Western Europe enjoyed in the early 1960s. Switzerland, the Embassy in Bern concluded, wanted to preserve «its duty of solidarity with the rest of humanity» along with its «constitutional obligations to safeguard its neutrality». At the same time Bern moved to further develop its nuclear capabilities; in August the Government announced that a second private company had broken ground on a nuclear power plant. Because

⁸ «Letter from Luck to Edwin Kretzmann of the Department of State», February 24, 1964, BISTA, Box 1, ECIN – Economic Integration, Jan-April 1969, 3-OECD Organizations and Conference, NA.

⁹ «Letter from Luck to Prof. Dr. Otto Jaag», March 11, 1964, and «Letter from Jaag to Luck», March 22, 1964, BISTA, Box 5, Bern Correspondence, 1964, NA.

the company had decided to work with two US companies, General Electric and Westinghouse, the State Department gave its approval. Steiner helped smooth over the few minor technical and diplomatic difficulties that arose from the sale.¹⁰

In October, Luck told the State Department that the Swiss were planning to establish a «Science Council» to directly advise the Federal Government about science policy. At the same time he reported that the Swiss National Foundation had recommended, and Federal Government had agreed, the doubling of the Federal Government's scientific subsidy over the next five years.¹¹

On January 8, 1965, the Embassy in Bern reported a new push by the Swiss Government to complete construction of the two privately-built nuclear power plants by 1969. Dr. Hochstrasser had just explained to Luck and Ambassador W. True Davis that Switzerland had «no time to lose, that in fact» the country was «lagging behind other nations in working on atomic energy developments.» Bern had decided to build new nuclear power plants every two years because the nation's scientists predicted that at least half of the country's power would be furnished by nuclear power plants. Three months later the Government issued its annual report on foreign policy, which emphasized the necessity to move from hydroelectric to atomic power. Two days after the report was publicized, Luck reported that the Government had recently established a Science Advisory Committee, providing more evidence that the Government continued to see science as a means for national development. On April 27, Swiss President Hans-Peter Tschudi linked his country's «economic future, and thus for the standard of living of our population», to the «success of the research of our scientists and engineers. There are direct relations between the effort in science and research, and economic growth.»¹²

It was in this atmosphere that talks to renew the Cooperative Agreement on nuclear energy sharing began in earnest in 1965. Both countries wanted to continue cooperating, and the scientific attachés in Washington and Bern did yeoman work in keeping the renewal ship sailing smoothly. In June, Thomas informed the AEC that Attaché Rollard had informed him that the Swiss wanted to ensure that

10 «Airgram A-992 from the Embassy in Bern to the Department of State», April 24, 1964, DOSCF, Box 2680, POL 1, SWITZ, General Policy Background, 1/1/64, NA, «Airgram A-147 from the Embassy in Bern to the Department of State», August 14, 1964, DOSCF Box 2681, POL 2-1 SWITZ, Joint Weekas, 8/1/64, and «Letter from Steiner to Watt», August 27, 1964, BISTA, Box 5, Switzerland, NA.

11 «Letter from Luck to Eugene Kovach of the Department of State», October 29, 1964, BISTA, Box 5, Bern Correspondence, 1964, NA.

12 «Airgram A-567 from the Embassy in Bern to the Department of State», January 8, 1965, SCF Box 2681, POL 2-1 SWITZ, Joint Weekas, 1/1/65, «Airgram A-857 from the Embassy in Bern to the Department of State», April 21, 1965, DOSCF Box 2680, POL 1 SWITZ, General Policy Background, 1/1/64, and «Airgram A-866 from the Embassy in Bern to the Department of State», April 23, 1965, DOSCF Box 3123, SCI SWITZ, 1/1/64, and «Airgram A-884 from the Embassy in Bern to the Department of State», April 30, 1965, DOSCF Box 3123, SCI 11, Research SWITZ, 1/1/64, NA.

the two nations not only share production of nuclear materials, in particular uranium, but also the «enrichment» of the materials. In return they seemed amenable to the establishment of strong safeguards to ensure that both the Swiss and US Governments could verify that any private Swiss firms that worked with plutonium or any other materials followed the rules set down by the AEC.

Rollard then «expressed some personal doubts, although he made it clear that these were personal and not official comments», that the Agreement would be signed before the current session of the US Congress because back home the Swiss wanted to pass a referendum on the issue. Thomas, however, replied that Hochstrasser himself had expressed «on several different occasions» the «urgency for bringing this agreement into force». He further noted that any signing delay would push the issue into 1966, and this seemed unacceptable to both the Swiss Federal Government and its scientific community.

Rollard then brought up what, upon closer reading, seemed to be the real reason for his «concern», namely that at the moment, the draft Agreement only covered quantities of nuclear materials for the next five to seven years. This «left him in trouble», because what he really wanted was access to materials that could be shared over the next 30 years. Thomas replied that «US policy as well as practical considerations» made it «impossible for us to commit gaseous diffusion plant capacity for many years in advance unless the government to whom we are committing it has definite projects in sight.» Again, just like two years before, the issue between the two governments was the extent to which cooperation influenced control over the materials. Thomas, like before, thought about the issue, and in the end decided that both US self-interest and Hochstrasser's «eagerness to get on with this whole program» demanded that the AEC give in on the 30-year issue. On July 8, Thomas recommended that the National Security Council approve the 30-year extension of the Agreement.¹³

The State Department and the AEC spent the next 5 months pushing the Agreement through the bureaucracy. Meanwhile, State had to confront a dilemma: Luck had left his post as Scientific Attaché in Bern at the end of 1964, and Dr. Henri Bader, a geo-physicist, replaced him in early 1965. But Rollard, Thomas, and Herman Pollack, the Acting Director of the Bureau of International Scientific and Technological Affairs, had developed such a strong working relationship in Washington, and the Embassy in Bern seemed to be searching to find work for the new Scientific Attaché to do. Unfortunately, the Chargé d'Affaires in Bern, Henry Kellerman, and Bader agreed that even though Switzerland's scientific profile had grown significantly in the past four years, it still was «not one of the major contributors in the field of science – certainly not on par with the NATO allies» that they questioned why the Department needed a Scientific Attaché in Bern. Add to

¹³ «Letter from Thomas to Harold Bengelsdorf of the Atomic Energy Commission», June 11, 1965, BISTA Box 8, AE, Atomic Energy (GEN), and «Letter from Thomas to Charles Johnson of the National Security Council», July 8, 1965, AE 4, Switzerland, NA.

this the fact that the State Department was always looking to cut back positions for budgetary reasons and the position seemed to be doomed. Kellerman concluded «there is no function for Dr. Bader to perform in Geneva unless his presence and assistance is specifically requested.» Bader remained «doubtful that many requests will be forthcoming.»¹⁴

On December 6, the State Department informed Bader that barring some kind of miracle, the post of Scientific Attaché would be phased out of Bern by mid 1966. Pollack explained that he could not «escape the conclusion that the welfare» of the entire Scientific Attaché «program calls for more effective utilization of our resources than is possible with the position in Switzerland.» It seemed likely that State would create a Scientific Attaché position «with respect to coverage of the Iron Curtain countries» and let other Embassy personnel in Bern handle any scientific issues.¹⁵

In spite of the tenuousness of the Attaché position in Bern, back in Washington Rollard and Pollack were able to successfully work with the White House in December. And on December 30, President Lyndon Johnson signed the renewal of the Agreement with the 30-year stipulation the Swiss wanted and the safeguards provision the State Department and the AEC wanted. Ultimately, State kept the Attaché position open in Berlin.

The importance of the Scientific Attaché in Swiss–US relations episode demonstrates the necessity of lower-level diplomacy. Presidents and Secretaries of State, and Federal Governments, set overall strategies, but day-to-day relations require engaged members of the diplomatic community. The Swiss would not have been able to secure a steady supply of nuclear materials and know-how without the hard work put in by their own Scientific Attachés in Washington or the American Scientific Attachés in Bern, who assumed responsibility for maintaining the unique relationship between the two countries during the Cold War. Switzerland also protected its neutrality, shared in America's nuclear technology, and ultimately secured a long-term energy supply.

14 «Letter from Henry Kellerman to Herman Pollack of the Department of State», September 3, 1965, BISTA, Box 8, ORG – Organization and Administration, General Policy, Plans, Coordination 1965, NA.

15 «Letter from Pollack to Bader», December 6, 1965, *ibid.*