

# The Coproduction of Neutral Science and Neutral State in Cold War Europe: Switzerland and International Scientific Cooperation, 1951–69

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## ABSTRACT

Neither science nor state has ever been transcendently “neutral,” but they have sometimes been made neutral, together, as this paper shows in the context of cold war Europe. The paper explores how the Swiss government tried to “depoliticize” and “demilitarize” new international research institutions in the fields of high-energy physics (CERN), space research (ESRO and ELDO), and molecular biology (EMBL) in order to make science neutral. Conversely, this paper investigates how participation in “neutralized” scientific institutions supported Switzerland’s neutrality policy and strengthened this essential element of its national identity. It thus addresses symmetrically the coproduction of neutral science and neutral state.

## INTRODUCTION

During the cold war, setting foot on the Moon or producing an atomic mushroom cloud were as much about nation building as about scientific and technological development. America’s national identity was reinforced by its successful landing on the Moon; the French and the Indian national identities were transformed when they detonated their first atomic bombs. These scientific accomplishments expressed American global power, French *grandeur*, and Indian independence.<sup>1</sup> National identity has linked science and state in subtle ways since the scientific revolution, but during the

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<sup>1</sup> On the United States’ spaceflight program, see Roger D. Launius and Howard E. McCurdy, *Spaceflight and the Myth of Presidential Leadership* (Urbana, Ill., 1997). On France’s and India’s atomic bombs, see Dominique Mongin, *La bombe atomique française, 1945–1958* (Paris, 1997); and Itty Abraham, *The Making of the Indian Atomic Bomb: Science, Secrecy, and the Postcolonial State: Postcolonial Encounters* (New York, 1998). In the case of France, this perspective is taken up most directly and successfully in Gabrielle Hecht, *The Radiancy of France* (Cambridge, Mass., 1997). On technology and the United States, see David E. Nye, *America as Second Creation: Technology and Narratives*

cold war, this relationship grew particularly strong as nation-states became the main patrons of scientific research. Yet more important, to a larger extent than at any time before, the military, economic, and cultural destinies of nations were perceived to rest on advances in science and technology. It should thus come as no surprise that science, along with other social productions, played an essential role in the construction of national identities in this period.

Until recently, scholars have rarely focused on this issue, turning their attention instead on the reverse relationship, namely how national contexts and identities have shaped scientific endeavors. Much of this literature, even in the science and technology studies tradition, has been far from “symmetrical,” in the sense that society and culture have been taken as stable entities that can explain the construction of science and technology, but rarely has the reverse been considered.<sup>2</sup> The distinctively national dimensions of “scientific styles” and scientific theories, for example, have been treated as if they emerged from an independent political culture, as in Paul Forman’s classic study on quantum mechanics and Weimar culture, or from established national institutions, as in Jonathan Harwood’s work on genetics in the United States and Germany.<sup>3</sup>

Here, I would like to adopt both perspectives simultaneously, by focusing on the coproduction of science *and* national identity.<sup>4</sup> Taking the example of Switzerland, I will examine the diplomatic efforts deployed at making international science neutral and, at the same time, look at how science gave substance to Switzerland’s neutrality policy.<sup>5</sup> This study focuses on the role of the Swiss Department of Foreign Affairs and Swiss scientific statesmen in the creation of three major institutions devoted to international scientific cooperation in the fields of nuclear physics, space research, and molecular biology, respectively.<sup>6</sup> The paper explores how these different oppor-

*of New Beginnings* (Cambridge, Mass., 2003). More recent examples include cloning research and nation building in South Korea.

<sup>2</sup> Bruno Latour made this point long ago. Bruno Latour, *Science in Action: How to Follow Scientists and Engineers through Society* (Cambridge, Mass., 1987). A rare exception is Hecht, *Radiance of France* (cit. n. 1).

<sup>3</sup> Paul Forman, “Weimar Culture, Causality, and Quantum Theory: Adaptation by German Physicists and Mathematicians to a Hostile Environment,” *Historical Studies in the Physical Sciences* 3 (1971): 1–115; Jonathan Harwood, “National Styles in Science: Genetics in Germany and the United States between the World Wars,” *Isis* 78 (1987): 390–414.

<sup>4</sup> On coproduction, see Sheila Jasanoff, ed., *States of Knowledge: The Co-Production of Science and Social Order* (New York, 2004), chap. 1.

<sup>5</sup> For a preliminary account of the former argument, see Bruno J. Strasser and Frédéric Joye, “Une science ‘neutre’ dans la guerre froide? La Suisse et la coopération scientifique européenne (1951–1969),” *Revue Suisse d’Histoire* 55 (2005): 95–112; for the latter, see Strasser and Joye, “L’atome, l’espace et les molécules: La coopération scientifique internationale comme nouvel outil de la diplomatie helvétique (1951–1969),” *Relations Internationales* 121 (2005): 59–72. For a study on the role of Swedish neutrality in Swedish-American relations in the field of guided missiles, see Mikael Nilsson, *Tools of Hegemony: Military Technology and Swedish-American Security Relations, 1945–1962* (Stockholm, 2007). More generally on scientific cooperation as a tool and foreign policy, especially in the United States, see John Krige and Kai-Henrik Barth, “Introduction: Science, Technology, and International Affairs,” *Osiris* 21 (2006): 1–21; Clark A. Miller, “‘An Effective Instrument of Peace’: Scientific Cooperation as an Instrument of U.S. Foreign Policy, 1938–1950,” *Osiris* 21 (2006): 133–60; Ronald E. Doel and Kristine C. Harper, “Prometheus Unleashed: Science as a Diplomatic Weapon in the Lyndon B. Johnson Administration,” *Osiris* 21 (2006): 66–85.

<sup>6</sup> For an overview of European scientific cooperation, John Krige and Luca Guzzetti, eds., *History of European Scientific and Technological Cooperation* (Brussels, 1997); and John Krige, “The Politics of European Scientific Collaboration,” in *Science in the Twentieth Century*, ed. John Krige and Dominique Pestre (New York, 1997): 897–918.

tunities for international scientific cooperation in Europe were perceived by the state not just as scientific, economic, or military opportunities but also as tools for reinforcing the central pillar of Switzerland's national identity, namely its proclaimed neutrality. The alleged neutrality, universality, and objectivity of science<sup>7</sup> were a perfect illustration of what political neutrality stood for—if only science could be made to conform to these ideals in the midst of the cold war. This was obviously not a simple task because, as recent historiography has shown, science was, during this period, more often highly politicized and militarized than neutral. As John Krige has argued, for example, the United States used science as a powerful political and cultural weapon in postwar Europe.<sup>8</sup> At the same time, the military establishments in Europe and in the United States embraced science for its relevance to the key technologies of the cold war, even in fields seemingly far removed from immediate practical applications.<sup>9</sup> Thus, if science were to play a role in Switzerland's national identity, it had to be *made* neutral.

Scholars no longer consider national identities as natural entities—as was the case when they used the Enlightenment's concepts of the “spirit of nations” and the “national genius”—nor as abstract political ideologies or essential human attributes.<sup>10</sup> National identities are now understood as artifacts, the products of cultural and political processes, and as tools to attain certain political and economic goals, even long after nations have become stabilized entities. To be sustained, national identities need to be constantly reproduced and reinterpreted to adapt to changing environments, while at the same time giving a sense of permanence, reflecting the nation's past.<sup>11</sup> National identities can thus be seen to lie at the intersection of collective memories of a shared past and of wishful projections of a community's future. Understandably, in modern states, governments have played an essential role in crafting and sustaining national identities to support their current political goals. Indeed, the resulting national identities, as “imagined communities,” to take Benedict Anderson's classic formulation,<sup>12</sup> have been essential to the very existence of the nation and to the state's power.

<sup>7</sup> On neutrality, universality, and objectivity, see Robert N. Proctor, *Value-Free Science? Purity and Power in Modern Knowledge* (Cambridge, Mass., 1991); Bruno Latour, *Pandora's Hope—Essays on the Reality of Science Studies* (Cambridge, Mass., 1999); Lorraine Daston and Peter Galison, *Objectivity* (Brooklyn, N.Y., 2007).

<sup>8</sup> John Krige, *American Hegemony and the Postwar Reconstruction of Science in Europe* (Cambridge, Mass., 2006).

<sup>9</sup> Paul Forman, “Behind Quantum Electronics: National Security as Basis for Physical Research in the United States, 1940–1960,” *Historical Studies in the Physical and Biological Sciences* 18 (1987): 149–229; Stuart W. Leslie, *The Cold War and American Science: The Military-Industrial-Academic Complex at MIT and Stanford* (New York, 1993); Amy Dahan and Dominique Pestre, eds., *Les sciences pour la guerre, 1940–1960* (Paris, 2004); and the life sciences, Angela N. H. Creager and Maria Jesus Santemas, “Radiobiology in the Atomic Age: Changing Research Practices and Policies in Comparative Perspective,” *Journal of the History of Biology* 39 (2006): 637–47.

<sup>10</sup> For a historical sociology of the concept, see Anthony D. Smith, *National Identity: Ethnonationalism in Comparative Perspective* (Reno, Nev., 1991); and Smith, *Nationalism: Theory, Ideology, History* (Malden, Mass., 2001). For a recent overview of the topic, see Gerard Delanty and Krishan Kumar, *The Sage Handbook of Nations and Nationalism* (London, 2006). For the point about human attributes, see Ernest Gellner, *Nations and Nationalism: New Perspectives on the Past* (Ithaca, N.Y., 1983), 6.

<sup>11</sup> On the creation of traditions, see Eric J. Hobsbawm and Terence Ranger, eds., *The Invention of Tradition* (Cambridge, UK, 1983).

<sup>12</sup> Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London, 1983).

This conception applies particularly well to the case of Switzerland. The people who were subsumed into the modern federalist Swiss state as it was created in 1848 did not all share a single language, religion, or culture. They represented various legal, social, and political traditions, so much so that they often had more in common with the people of neighboring nations than they did with each other. Thus, building and sustaining an “imagined community” was crucial to cementing such a diverse population into a national whole. Neutrality, federalism, and direct democracy were promoted as the political foundations of Switzerland’s national identity. Neutrality became so essential to the Swiss national identity that by 1957 Switzerland’s foreign minister could claim that “neutrality is for the Swiss a phenomenon as natural as that of water flowing along a riverbed.”<sup>13</sup> In particular, neutrality in foreign relations was a political necessity for the state, given the diverse cultural and political allegiances of its citizens.<sup>14</sup> Foreign policy was a means for shaping the perception of Switzerland’s national identity not only among foreign political elites but also among a broader public domestically. The origins of Switzerland’s neutrality were often presented as coinciding with the joining together in 1291 of the first states that eventually formed Switzerland. In fact, Swiss neutrality was only recognized in international law at the Congress of Vienna in 1815. And since then, it had been permanently reinvented to adapt to changing foreign and domestic environments. The political value of neutrality, originally about the avoidance of war, came to incorporate crucial diplomatic and commercial functions as well, allowing Switzerland to play a disproportionately important role in world affairs and to sustain continued commercial relationships with all parties, even in wartime.

After World War II, the idea that Switzerland had been neutral during the conflict was widely believed in the country and provided a morally acceptable explanation as to why it had escaped the destruction that still afflicted its neighbors.<sup>15</sup> In international affairs, this idea was used to justify Switzerland’s intense commercial relationships with Nazi Germany during the war, all the while positioning the country unambiguously on the side of the winning allied nations. As cold war tensions mounted, neutrality was again perceived as a political and commercial opportunity in the context of the new world order. It would guarantee the independence of a small state surrounded by powerful neighbors, allow it to play a privileged role in international affairs, and widen the range of its potential commercial partners, even as the country aligned itself, particularly after the 1950s, squarely with the “free world.”<sup>16</sup>

The notion of neutrality, however popular in Switzerland among the general population and government officials, was heavily criticized abroad in the immediate post-war period. The United States, for example, interpreted Switzerland’s neutrality as a cover-up for its sustained commercial relationships with Nazi Germany and as an excuse for engaging in trade with communist countries while benefiting from its geo-

<sup>13</sup>Max Petitpierre, “Conférence donnée le 9 novembre 1957 à Milan,” 9 Nov. 1957, *Documents Diplomatiques Suisses* (available from <http://www.dodis.ch>) (hereafter cited as DoDiS), 14037.

<sup>14</sup>Max Petitpierre, Switzerland’s foreign minister from 1945 to 1961, made this point in Max Petitpierre, “La neutralité Suisse,” 28 May 1953, DoDiS, 14036.

<sup>15</sup>Hans Ulrich Jost, *Le salaire des neutres: Suisse, 1938–1948* (Paris, 1999); Georg Kreis, *Switzerland and the Second World War* (New York, 2000).

<sup>16</sup>Dominique Dirlewanger, Sébastien Guex, and Gian Franco Pordenone, *La politique commerciale de la Suisse de la seconde guerre mondiale à l’entrée au GATT (1945–1966)* (Zürich, 2004).

graphic position and cultural ties with the Western alliance.<sup>17</sup> The United States and other countries continued to criticize Swiss neutrality in the following two decades. In 1957, Switzerland's foreign minister put it mildly when he observed, "The word 'neutral' is not by itself very attractive. . . . Neutrality does not have a very good reputation."<sup>18</sup> Indeed, as George W. Ball, the U.S. undersecretary of state for economic and agricultural affairs in the Kennedy and Johnson administrations, recalled about the early 1960s: "In my view, Sweden and Switzerland defined 'neutrality' to suit their own purposes, and I had no sympathy for such casuistry."<sup>19</sup> Building a neutrality policy that would be credible abroad and at home was one of the great challenges of the Swiss Department of Foreign Affairs after 1945.<sup>20</sup>

To achieve this goal, those responsible for foreign policy resorted to boundary work: they constructed a pragmatic distinction in international affairs between "political" domains, in which Switzerland would abstain from participating, and "apolitical" domains, in which the country could fully take part. Max Petitpierre, Switzerland's foreign minister from 1945 to 1961, created the category of "technical" organizations and purposes to cover all aspects of foreign relations that were neither military nor political. In 1947, for example, speaking before the parliamentary commission debating Switzerland's possible candidacy for the United Nations, he made this point clear: "Neutrality remains our guiding principle and for this reason we cannot, at least for now, envision joining the planned world security organization. However, we should, as of now, make clear our interest in collaborating with technical (economic, social and humanitarian) organizations."<sup>21</sup> Indeed, Switzerland did not join the United Nations but did become a member of most of its affiliated organizations, such as the World Health Organization (WHO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The notion of technical domains was convenient in that it was flexible enough to adapt itself to different contexts, while still carrying the idea that it was necessarily nonpolitical. Switzerland thus made every effort to play a leading role in these "technical" international organizations, so as to compensate for its absence from the others, and to give a positive meaning to "neutrality." Bern put a special emphasis on humanitarian aid through the International Committee of the Red Cross, for example, and cultural cooperation was promoted in the name of "solidarity." This notion had also been developed by Max Petitpierre as the other side of the neutrality coin, in order to respond to the criticism that neutrality amounted to isolationism and was nothing more than a pretext to escape international, moral, and political responsibilities.<sup>22</sup>

<sup>17</sup>Daniel Trachsler, *Neutral Zwischen Ost Und West? Infragestellung und Konsolidierung der Schweizerischen Neutralitätspolitik durch den Beginn des Kalten Krieges, 1947–1952* (Zürich, 2002); Mauro Cerutti, "La Suisse dans la guerre froide: La neutralité Suisse face aux pressions Américaines à l'époque de la guerre de Corée," in *Guerres et paix*, ed. Michel Porret, Jean-François Fayet, and Carine Fluckiger (Geneva, 2000), 321–42.

<sup>18</sup>Petitpierre, "Conférence donnée" (cit. n. 13).

<sup>19</sup>George W. Ball, *The Past Has Another Pattern: Memoirs* (New York, 1982), 219.

<sup>20</sup>Daniel Möckli, *Neutralität, Solidarität, Sonderfall: Die Konzeptionierung der Schweizerischen Aussenpolitik der Nachkriegszeit, 1943–1947* (Zürich, 2000).

<sup>21</sup>Quoted in Antoine Fleury, "La Suisse et le défi du multilatéralisme," in *La Suisse dans le système international de l'après-guerre, 1943–1950*, ed. Georg Kreis (Basel, 1996), 68–83. On Petitpierre, see Louis-Edouard Roulet, ed., *Max Petitpierre: Seize ans de neutralité active: Aspects de la politique étrangère de la Suisse, 1945–1961* (Neuchâtel, 1980).

<sup>22</sup>Petitpierre, "Conférence donnée" (cit. n. 13).

Recent historiography of Swiss neutrality has emphasized the role of Switzerland's participation in international cultural, social, and humanitarian collaboration, while ignoring the importance of international scientific cooperation.<sup>23</sup> By focusing on Switzerland's involvement in different projects of international scientific cooperation in the name of its neutrality policy, one can understand how science can play a role in defining national identities and at the same time how national identities can shape the institutional dynamics of science—what I like to call the coproduction of neutral science and neutral state.

#### ATOMIC PHYSICS IN A GLASS HOUSE

The creation of CERN, the European organization for nuclear research, in 1954, constituted the first major accomplishment of the cold war in terms of European scientific collaboration. Much has been written about the complex processes that led to the birth of CERN; most of that historiography focuses on the role of the European scientists and science administrators who promoted the project, the interests of the major European states involved, and the context of the European integration movement. Before examining closely the role of Switzerland in this process, I will give a brief overview of the course of events.<sup>24</sup>

In December 1949, at the European cultural conference in Lausanne, Switzerland, the French science administrator Raoul Dautry had a resolution to study the creation of a "European center for atomic research" passed.<sup>25</sup> Six months later, at the annual UNESCO conference in Florence, the American physicist and statesman Isidor I. Rabi proposed a resolution encouraging the creation of regional laboratories in Europe; the participating states adopted the proposal. These proposals gained momentum as they were taken up by several nuclear and cosmic ray physicists and by science administrators from different European countries. Dautry and the French cosmic ray physicist Pierre Auger took leading roles in defining a project focused on building on the European continent the largest particle accelerator in the world. A proposal was eventually submitted by a group of scientists led by Auger to an inter-governmental conference sponsored by UNESCO in December 1951. Support from the member states led three months later, at a meeting in Geneva, to the creation of a temporary organization and the signing, in June 1953, of a convention establishing CERN. Almost three-quarters of the funds were provided by France, Germany, and Great Britain, proportional to their gross national products, to build large particle accelerators. This convention was eventually ratified by eleven Western European countries plus the nonaligned Yugoslavia.<sup>26</sup> In May 1954, the construction of CERN began just outside the city of Geneva, in an agricultural field.

The Swiss government played a distinctive role in defining the political contours of CERN. Even though the country's financial contribution promised to be modest and its expertise in nuclear physics was not on par with that of France or Great

<sup>23</sup> Möckli, *Neutralität* (cit. n. 20); Trachsler, *Neutral Zwischen Ost Und West?* (cit. n. 17).

<sup>24</sup> Armin Hermann, John Krige, Ulrike Mersits, and Dominique Pestre, eds., *History of CERN*, 4 vols. (Amsterdam, 1987–96).

<sup>25</sup> Dominique Pestre and John Krige, "Some Thoughts on the Early History of CERN," in *Big Science: The Growth of Large-Scale Research*, ed. Peter Galison and Bruce Hevly (Stanford, Calif., 1992), 78–99.

<sup>26</sup> Belgium, Denmark, France, Germany, Greece, Italy, the Netherlands, Norway, Sweden, Switzerland, the United Kingdom, and Yugoslavia.

Britain, the fact that Switzerland had been a likely site for the future laboratory had given the Swiss government considerable leverage from the beginning. Together with most scientists involved in the project, the Swiss government pressed hard to “depoliticize” and “demilitarize” the CERN project to bring it into conformity with the ideal of scientific neutrality. Of course in the tense period of the cold war, building an immensely expensive laboratory devoted to research in one of the militarily most strategic fields of science could hardly be expected to be brought about from scientific interests alone. Yet in the end, CERN became an international nuclear physics laboratory devoid of military influence, relatively independent of the participating nations’ particular political agendas, and dominated by the physicists’ scientific goals as the result of a sinuous political and social process in which neutral countries, such as Switzerland, played a key role.

The Swiss government became officially involved in the CERN project in August 1951, when the foreign minister, Max Petitpierre, received an invitation to have Switzerland represented at the conference convened by UNESCO.<sup>27</sup> Most of the community of Swiss physicists consulted by Petitpierre favored the project of an international laboratory, largely because it would offer research opportunities they could not have dreamed of in the national context. One of them remarked that “the future of physics in Switzerland depends immensely upon the realization of this project.”<sup>28</sup> Other physicists outlined the possible economic advantages of Switzerland’s participation, which could constitute an “excellent deal,” because the Swiss industry could sell equipment for the future laboratory, perhaps at a total price even higher than the government’s contribution to the project.<sup>29</sup>

A few physicists were more hesitant, however. In addition to any moral reservations they might have had, they feared that if the project came to embody the military and political interests of some larger participating states, it would be difficult to build the intergovernmental consensus necessary to carry out CERN’s mission.<sup>30</sup> In the unlikely event this hurdle could be overcome and a laboratory to pursue these military or political agendas was finally built, they warned, it would be of only limited scientific interest. They would have lost their autonomy in setting the laboratory’s scientific goals, and because of the military relevance of their research, they would be restricted in freely sharing their results, a practice they deemed to be essential for the production of scientific knowledge. They did not want CERN to resemble the American national laboratories, which they perceived as being embedded in a culture of secrecy and national security concerns. These scenarios were not too farfetched in the European case, because a number of European nations, including Switzerland, had ongoing programs to develop atomic bombs and often skillfully maintained an ambiguous dividing line between civilian and military research.<sup>31</sup> The president of

<sup>27</sup> James Torres-Bodet to Max Petitpierre, 31 Aug. 1951, E 2001-04 (-) -/6, vol. 39, Swiss Federal Archives, Bern, Switzerland (hereafter cited as BAR).

<sup>28</sup> “Laboratoire européen de recherche nucléaires, Annexe 3: Procès verbal de la réunion de Lucerne, 2 October 1951,” 2 Oct. 1951, 8, E 2001-04 (-) -/6, vol. 39, BAR.

<sup>29</sup> *Ibid.*, 11.

<sup>30</sup> *Ibid.*

<sup>31</sup> On the Swiss atomic bomb project, see Frédéric Joye-Cagnard, *La construction de la politique de la science en Suisse: Enjeux scientifiques, stratégiques et politiques (1944–1974)* (PhD diss., Univ. of Geneva, 2007), chap. 3. The Swiss government was opposed only to military research carried out in collaboration with other countries, since that would violate its neutrality policy, not to research carried out independently.

the Swiss society for physics thus insisted vehemently that the CERN project should “carefully avoid any military aspect” and be “open to any nation.”<sup>32</sup> The openness to all countries, whatever their political allegiances, was a means to ensure that the laboratory did not pursue military goals. The Swiss physicists also believed that locating the laboratory in Switzerland, a country with a “neutrality tradition,” could help prevent the possible militarization and politicization of the laboratory.<sup>33</sup>

Other Swiss physicists had different concerns. They feared that the international project would compete with financial resources available for research at the national level.<sup>34</sup> Paul Scherrer, for example, had opposed an earlier and more ambitious project precisely on these grounds.<sup>35</sup> Given Scherrer’s stature as the leading Swiss physicist and a high-profile public figure, his position was crucial to the Swiss government. Other European physicists were well aware of Scherrer’s influence. As Pierre Auger wrote to a colleague: “Among the personalities that we need to have with us in the enterprise, there is Scherrer. You know perhaps that he is not favorable to the project. But we must convince him, because he determines the attitude of the federal government, and because the Dutch and Swedish opinions depend on it to some extent.”<sup>36</sup> Switzerland’s participation in the project seemed to be of prime importance to Auger, most likely because it would constitute the best public statement and long-term guarantee that the project was not being manipulated by some of the large European states’ military or political establishments. Opposition to the project from other leading European physicists led Auger’s group to propose a more modest accelerator as a first step, and only later a larger one, a scheme that then received Scherrer’s full support. This constituted the proposal submitted to the UNESCO conference of December 1951.

Given the Swiss physicists’ support, the government decided to participate in the UNESCO conference and gave precise instructions to its delegation, such as proposing Geneva as the site of the future laboratory.<sup>37</sup> But the Department of Foreign Affairs made clear that there was one nonnegotiable condition to Switzerland’s participation: “The organization must be open to all European nations, including Eastern Europe, [and] its activities cannot be secret in any way, and should aim only at scientific and civilian goals.”<sup>38</sup> With these instructions, the Swiss government followed precisely the key concerns voiced by the physicists one month earlier.

At the UNESCO conference, Alfred Picot, a local politician from Geneva and member of the Swiss delegation, was particularly attentive to the issue of CERN’s neutrality. To avoid any military interpretation of the project, he suggested, for example, the addition of some broad lines indicating that CERN would “benefit the

<sup>32</sup> “Laboratoire européen de recherche nucléaires” (cit. n. 28).

<sup>33</sup> *Ibid.*, 11.

<sup>34</sup> On the opposition to CERN from the older generation of European physicists, such as Paul Scherrer, see John Krige, “Scientists as Policymakers: British Physicists’ ‘Advice’ to Their Government on Membership of CERN (1951–1952),” in *Solomon’s House Revisited: The Organization and Institutionalization of Science*, ed. Tore Frängsmyr (Sagamore Beach, Mass., 1990), 270–91.

<sup>35</sup> “Procès-verbal du Conseil fédéral,” 6 Nov. 1951, 1004.1 (-) -/1/, vol. 535, DoDiS 8137, BAR.

<sup>36</sup> Pierre Auger to Victor Weisskopf, 5 July 1951, CERN Archives, Geneva, reproduced in Hermann et al., *History of CERN* (cit. n. 24).

<sup>37</sup> The Swiss delegation comprised three physicists (Paul Scherrer, Peter Preiswerk, and André Mercier), a psychologist (Jean Piaget), a member of the state of Geneva’s government (Albert Picot), and a member of the Department of Foreign Affairs (Bernard Barbey). “Décision du Conseil fédéral,” 6 Nov. 1951, E 1004 1951, vol. 535, DoDiS 8137, BAR.

<sup>38</sup> “Instructions pour la délégation Suisse,” 27 Nov. 1951, E 1004 1951, vol. 535, BAR.

progress of medicine and hygiene.”<sup>39</sup> More important, he opposed the French delegation, which wanted to continue the negotiation within an ad hoc intergovernmental group and insisted that the future discussions about CERN be held under the auspices of UNESCO. The Swiss delegation unanimously supported this proposition to save the “principle of neutrality” of CERN. Indeed, as Picot explained: “On the one hand, with UNESCO the door remains open for new candidates from the Eastern countries. On the other side, this institution is a glass house, and one cannot suspect it of hiding military secrets.”<sup>40</sup> The participation of Eastern European countries would make clear, according to Picot, that CERN was “not an American project” as some had implied because it had been initiated in part by Isidor I. Rabi, as a representative of the United States to UNESCO in 1950.<sup>41</sup> Picot tried to convince the Swiss public and the parliament alike that this was not the case and that CERN was first and foremost an initiative of the European scientific community. The openness of the laboratory was also a crucial point for Picot, because it hinged on the possible militarization of the laboratory, as the foreign minister had already pointed out. To the parliament, he acknowledged that “the words ‘nuclear energy’ evoke for many ‘atomic bombs’, and consequently certain fears. [But] atomic bombs are constructed in extremely secret places,” which would not be the case with CERN, Picot argued.<sup>42</sup> Making sure the laboratory became a “glass house” was thus a means to prevent a possible militarization of CERN, because secrecy was a prerequisite for any research related to national security.

The participation of communist countries in CERN was a contentious issue among the delegations represented at the UNESCO conference.<sup>43</sup> For the Swiss government, the inclusion of Eastern European countries was key to the neutrality of the laboratory; for others, it represented an unacceptable opening toward their rivals in a bipolar world. Two years earlier, in an internal memo, the Swiss government had already been concerned with its position in this regard:

The cooperation in the field of atomic research with nations of the Western alliance could be interpreted to some extent by the Eastern countries as a cooperation in the field of military armament. The explanation that for us it involves only the exploitation of atomic energy for economic purposes will not be taken seriously and considered as bare camouflage.<sup>44</sup>

Thus, the Swiss Department of foreign affairs began to worry when its delegation reported that “the French and Italian delegations have insisted, in corridor conversations, that the future laboratory be exclusively open to Western European nations. They don’t want the laboratory to offer the Eastern countries precious sources of information without equivalents for Western physicists, and they are especially worried about adverse public opinion” in these countries.<sup>45</sup> This was bad news for Max Petitpierre, who confessed that he was “very concerned by the question of the laboratory’s

<sup>39</sup> Albert Picot to Max Petitpierre, 17 Jan. 1952, E 2001-04 1970/346, vol. 209, BAR.

<sup>40</sup> Albert Picot to Max Petitpierre, 24 Dec. 1951, E 2001-04 (-) -/6, vol. 39, BAR.

<sup>41</sup> On the place of CERN in U.S. foreign policy, see Krige, *American Hegemony* (cit. n. 8), chap. 3.

<sup>42</sup> “Procès verbal de la séance de la commission du Conseil des Etats chargée d’examiner le message du Conseil fédéral du 4 avril 1952,” 4 April 1952, E 2001-04 1970/346, vol. 209, BAR.

<sup>43</sup> See John Krige’s contribution to Hermann et al., *History of CERN* (cit. n. 24), chap. 8.

<sup>44</sup> DMF to DPF, DEP, and DFI, 13 Feb. 1950, E 5155 (-) 1971/202, vol. 65, BAR.

<sup>45</sup> Jean Piaget, “Notice,” 25 Jan. 1952, E 2001-04 1970/346, vol. 209, BAR.

universality.”<sup>46</sup> In a moment of discouragement, he reflected that “there is a rift so wide between East and West that it makes all collaboration absolutely impossible in the atomic domain.”<sup>47</sup> In this context, he feared that the laboratory might become “a new organization of the Western bloc.”<sup>48</sup> If this were to be the case, he was ready to “renounce that the laboratory be hosted in Switzerland.”<sup>49</sup> Petitpierre thus instructed the Swiss delegation to remain extremely careful concerning the location of the future laboratory.

To make matters worse, the United Kingdom proposed not only excluding Eastern European nations but also opening up CERN to the Commonwealth (including Australia and Canada) and the United States.<sup>50</sup> The British delegation even succeeded in having the word “European” suppressed from the categorization of potential participating nations to CERN; among the participants, Switzerland alone voted against the measure.<sup>51</sup> This event shows the very different meanings that the political configuration of CERN would take for various countries. For the United Kingdom, the Atlantic positioning of CERN would make clear that the project was not related to the ongoing European integration movement, a process toward which the British remained extremely skeptical, and thus it would look less politically contentious and well in tune with its “special relationship.” For Switzerland, the opposite was true: if CERN embodied an alliance between Western Europe and the United States, it could be the sign of an Atlantic alliance, incompatible with Swiss neutrality policy. Thus, the Swiss argued, only by opening CERN up to Eastern European countries could it be considered truly neutral—neither Atlantic nor linked to the European integration movement.

A careful positioning of CERN was not just a foreign policy requirement for Switzerland; it was a domestic policy necessity as well, in view of the critical comments expressed “in numerous journals of all tendencies” about the compatibility of CERN with Switzerland’s neutrality, as Petitpierre pointed out. These reactions worried him all the more in that he expected them to have an impact on the Swiss parliament, which would have to approve Switzerland’s participation in CERN.<sup>52</sup> Furthermore, the Communist Party of Geneva had launched a referendum against the establishment of CERN,<sup>53</sup> arguing that the project “embroiled Switzerland deeper in the bloc of the imperialist warmongers, in the bloc fighting communism and Soviet Russia.”<sup>54</sup> Those behind the CERN project, a Communist Party leader claimed, “took advantage of Switzerland’s neutrality to protect an institute serving the United States by carrying out military research.”<sup>55</sup> In the case of new conflict, Geneva would thus become a target for the belligerents, he argued. With a referendum pending and criticism

<sup>46</sup> *Ibid.*, 2.

<sup>47</sup> *Ibid.*

<sup>48</sup> *Ibid.*

<sup>49</sup> *Ibid.*

<sup>50</sup> On the position of the United Kingdom, see Hermann et al., *History of CERN* (cit. n. 24), chaps. 12–13.

<sup>51</sup> *Ibid.*, 251.

<sup>52</sup> Max Petitpierre to Paul Scherrer, 8 Feb. 1952, E 2001-04 1970/346, vol. 209, BAR.

<sup>53</sup> Bruno J. Strasser, *La fabrique d’une nouvelle science: La biologie moléculaire à l’âge atomique (1945–1964)* (Florence, 2006), chap. 1.

<sup>54</sup> Intervention by Léon Nicole, *Mémoriaux du Grand Conseil du Canton de Genève*, 30 May 1953, on 628. On the referendum against CERN, see Strasser, *La fabrique* (cit. n. 53), chap. 1.

<sup>55</sup> Jean Vincent, “Rapporteur de la minorité,” in *Mémoriaux du Grand Conseil du Canton* (cit. n. 54), 612.

mounting, in not only the communist but also the conservative press, that CERN posed a threat to Switzerland's neutrality, the Swiss Department of Foreign Affairs was under pressure to find a way to demonstrate that this was not the case.

A small space for compromise opened up in the negotiations over CERN when someone realized that Switzerland's neutrality imperative did not require the actual participation of Eastern European nations to CERN, only the possibility of their participation. France, which was not favorable to the British plans, found the compromise formulation—in which candidacy to CERN was open to any country, but conditional on approval by every current member state, i.e. a negative vote by any member was tantamount to a veto.<sup>56</sup> As such, CERN would, in theory, be open equally to Poland and to the United States, but each member state could veto either candidacy. As John Krige put it in a nutshell, this solution “preserved the appearance of openness while masking the reality of exclusivity.”<sup>57</sup>

Switzerland's diplomatic efforts were successful in bringing the laboratory to Geneva and, in conjunction with the interests of the leading scientists, isolating it from the most powerful military and political interests.<sup>58</sup> The scientists' decision to concentrate on a particle accelerator and not a reactor (which would have been much more closely tied to military applications, due to the necessary production of plutonium), brought Switzerland's mission within reach. As a result, a neutral laboratory in high-energy physics was created at the pinnacle of the cold war. Its convention stated clearly that CERN “shall have no concern with work for military requirements and the results of its experimental and theoretical work shall be published or otherwise made generally available.”<sup>59</sup>

The neutrality of CERN's science not only made Switzerland's participation possible but also reinforced the credibility of its neutrality policy at a time when it was under strain. Indeed, in 1951 Switzerland reluctantly signed the Hotz-Linder Agreement with the United States, severely limiting Switzerland's exports to Eastern Europe, and drawing criticism at home that it had submitted itself to American interests.<sup>60</sup> The CERN negotiations constituted an opportunity to reposition Switzerland's diplomacy as more independent from the United States and open to relationships with Eastern European countries. Switzerland's position toward CERN was a manifestation of its concerns not only about finding its place in an increasingly bipolar world but also about its position toward the European integration movement, another challenge to its neutrality policy. The Swiss federal government had watched warily the development of the European Council in 1949 and of the European Coal and Steel Community in 1951, not joining either one.<sup>61</sup> But CERN gave the Swiss authorities a

<sup>56</sup> On France's position about the United States' joining CERN and toward the United Kingdom, see Dominique Pestre's contribution to Hermann et al., *History of CERN* (cit. n. 24), chap. 9; and “Note pour l'Ambassadeur de France à Londres,” 29 April 1953, CHIP 10022, CERN Archives; “Minutes of the Session,” 15 Dec. 1953, A151, CERN Archives.

<sup>57</sup> Hermann et al., *History of CERN* (cit. n. 24), 1:252.

<sup>58</sup> At the same time locating CERN in Switzerland was part of the concerns with the “German problem.” See Krige, *American Hegemony* (cit. n. 8), chap. 3.

<sup>59</sup> “Convention for the Establishment of a European Organization for Nuclear Research,” July 1953, article 2, CERN Archives.

<sup>60</sup> Cerutti, “La Suisse dans la guerre froide” (cit. n. 17). On the case of Sweden, see Nilsson, *Tools of Hegemony* (cit. n. 5).

<sup>61</sup> Antoine Fleury, “La Suisse et le Conseil de l'Europe,” in *Jalons pour une histoire du Conseil de l'Europe*, ed. Marie-Thérèse Bitsch (Bern, 1997), 151–65; Fleury, “La Neutralité Suisse à l'Épreuve de l'Union Européenne,” in *Neutrality in History*, ed. Jukka Nevakivi (Helsinki, 1993), 188–99.

chance to demonstrate their openness to a European project, reiterating their willingness to cooperate with their European neighbors, in areas considered nonpolitical and nonmilitary, or “technical” in the Swiss Department of Foreign Affairs’ terminology. High-energy physics, thus adjusted, was made to fit this agenda. CERN became a symbol of Switzerland’s neutrality and its role in mediating East-West relations during the cold war. On numerous occasions, the Swiss Department of Foreign Affairs used the case of CERN’s neutrality, exemplified by the fact that Russian and American scientists met there, to illustrate the inherent neutrality of Switzerland.<sup>62</sup> Neutral science and neutral state had been efficiently coproduced.

By the end of the decade, when a new opportunity for international scientific cooperation presented itself, the Department of Foreign Affairs reacted very favorably. The same issues presented themselves once again, but under a slightly different light, due to the changed international context and the evolution of Switzerland’s neutrality policy.

### SPACE RESEARCH AND THE ROCKET PROBLEM

In February 1959, when CERN’s massive proton synchrotron was about to go into operation for the first time, two of the physicists who had made it possible, Pierre Auger and Edoardo Amaldi, were in Paris discussing the creation of a similar organization devoted to space research.<sup>63</sup> The timing of this discussion should not come as a surprise. In October 1957, the first artificial satellite Sputnik began to orbit the earth, and as a response, the United States created NASA in October 1958.<sup>64</sup> By the end of the decade, space research had become a priority in science policy for a number of countries, including the United Kingdom, France, and Italy, all of which had their own national civilian or military space programs or both. In broad terms, space research was like atomic research, in that it was considered to involve “dual-use” technologies, military and civilian.<sup>65</sup> Atomic research could lead to building bombs and civilian power plants, just like space research was important for building missiles that could carry warheads and satellites. The launcher that carried Sputnik into orbit is a case in point, since it was also Russia’s first nuclear ballistic missile.

The Paris discussion between Auger and Amaldi resulted, through a complex process similar to the one that led to CERN, in the creation in 1962 of two organizations, the European Space Research Organization (ESRO) and the European Space Vehicle Launcher Development Organization (ELDO). The fact that two distinct organizations were created instead of one illustrates the tension between the civilian and mili-

<sup>62</sup> See, e.g., “Essai de définition d’une politique dans le domaine de la collaboration scientifique future,” 29 Aug. 1960, DoDiS 16953; and Petitpierre, “Conférence donnée” (cit. n. 13).

<sup>63</sup> On the history of space research in Europe, see John Krige and Arturo Russo, *A History of the European Space Agency, 1958–1987* (Noordwijk, Netherlands, 2000); for the case of Switzerland, see Büro für Weltraumgelegenheiten, ed., *Die Schweiz, Europa und die Raumfahrt, Abenteuer und Notwendigkeit* (Lausanne, 2000); Stephan Zellmeyer, *A Place in Space: The History of Swiss Participation in European Space Programmes, 1960–1987* (PhD diss., Univ. of Basel, 2007); Peter Creola, *Switzerland in Space—a Brief History* (Noordwijk, Netherlands, 2003).

<sup>64</sup> Roger D. Launius, John M. Logsdon, and Robert W. Smith, eds., *Reconsidering Sputnik: Forty Years since the Soviet Satellite* (London, 2002). The International Geophysical Year from July 1957 to 1958 also included an important component of atmospheric and space research.

<sup>65</sup> John Krige, “What Is ‘Military’ Technology? Two Cases of U.S.-European Scientific and Technological Collaboration in the 1950s,” in *The United States and the Integration of Europe*, ed. Francis H. Heller and John R. Gillingham (New York, 1996), 307–38.

tary dimensions of space research.<sup>66</sup> This tension would prove particularly difficult to resolve and make compatible with Switzerland's neutrality policy.

In January 1960, the Swiss federal government was asked by a parliamentary representative from Geneva if "it should not take the lead in creating a European organization for space research."<sup>67</sup> Max Petitpierre, still foreign minister at the time, deemed the question "quite urgent" and created a delegation of scientists, including Paul Scherrer and Marcel Golay, director of the Geneva Observatory, to represent Swiss interests.<sup>68</sup> The reason for moving ahead so promptly, and for enrolling scientists to represent national interests as early as possible in the process, was the hope of the Department of Foreign Affairs that the Swiss scientists could shape the future organization significantly: "It is only by acting quickly that we will be able to influence the shape and the activities of the new organization and that we can avoid the risk of facing projects developed within organizations that do not correspond to our institutions (we think in particular of NATO)."<sup>69</sup> Indeed, NATO had, as early as 1957, outlined plans to develop international cooperation in space research on a European basis.<sup>70</sup> The director-general of CERN, Cornelis Jan Bakker, warned the Swiss Department of Foreign Affairs that "the essential difficulty will consist in creating an organization that can conduct its activities without the interference of the military. One needs to prevent them from having any means of influencing the research of an organization that should solely respond to scientific and peaceful concerns."<sup>71</sup> In this respect, the European scientists behind the project could not agree more with Switzerland's position, since they too wanted to prevent political and military control over the organization.

Switzerland became a particularly valuable ally for the European scientists when, in April 1960, the United Kingdom proposed linking the project of a European space organization to their obsolete ballistic missile Blue Streak, which they hoped to convert to civilian uses.<sup>72</sup> Some scientists feared that this proposition could give a military flavor to the European project. After this threat of militarization, another politicization menace began to loom over the project. The Organization for European Economic Co-operation (OEEC) proposed to host the secretariat of commission in charge of developing the Auger and Amaldi project at a time when the OEEC was just about to become a more Atlantic organization by including the United States and Canada (becoming the OECD in 1961). Auger and Amaldi opposed both propositions, as they had resisted the earlier propositions of NATO to organize European

<sup>66</sup> The enormous difference in cost in developing a rocket or building a satellite was also a crucial issue. I thank John Krige for drawing my attention to this point.

<sup>67</sup> "Question Borel posée au Conseil fédéral le 25 janvier 1960," 25 Jan. 1960, E 2003 (A) 1971/44, bd. 94, BAR.

<sup>68</sup> "Note dictée par Max Petitpierre," 27 Jan. 1960, E 2003 (A) 1971/44, vol. 94, BAR.

<sup>69</sup> "Proposition du Département politique fédéral au Conseil fédéral," 30 May 1960, E 2003 (A) 1971/44, vol. 95, BAR.

<sup>70</sup> John Krige and Lorenza Sebesta, "US-European Co-Operation in Space in the Decade after Sputnik," in *Big Culture: Intellectual Cooperation in Large-Scale Cultural and Technical Systems*, ed. Giuliana Gemelli (Bologna, Italy, 1994), 263–85.

<sup>71</sup> Samuel Campiche, "Note en vue de l'entretien avec les savants suisses sur une organisation européenne pour la recherche spatiale," 14 March 1960, 1, E 2003 (A) 1971/44, vol. 94, BAR.

<sup>72</sup> The Royal Society, "Western European Space Research Meeting," 29 April 1960; "Draft Minutes," 30 April 1960, E 2003 (A) 1971/44, vol. 94, BAR. On Blue Streak, see Krige, "What Is 'Military' Technology?" (cit. n. 65); and Krige and Sebesta, "US-European Co-Operation" (cit. n. 70).

space research.<sup>73</sup> A member of the Swiss delegation made clear what the new orientation of the OEEC might mean for European space research:

The possible presence of the United States and Canada could compromise the political neutrality of the OEEC. Given the strategic dimension of space research and given the fact that it is particularly well developed in those countries, there might be unpleasant interference from their side on our European research.<sup>74</sup>

A member of the Swiss delegation also expressed his concerns that Austria, another neutral country, had not been invited to participate, raising further suspicions about the politicizing of the project.<sup>75</sup> And Switzerland was not the only neutral country concerned by these developments. Sweden also feared for its neutrality policy and insisted that any plans for a European organization be officially communicated to the Soviet Union.<sup>76</sup>

These irreconcilable positions clashed during the discussions between the delegations, bringing the negotiations to a dead end until Marcel Golay informed the assembly that he had just been authorized by the Swiss government to offer its help in convening an intergovernmental conference.<sup>77</sup> Understandably, the proposition was very well received by European scientists such as Auger, who pointed out that Switzerland could play a role for space research similar to the one that UNESCO had played for nuclear physics.<sup>78</sup> In the following meeting, Switzerland, with the support of the Norwegian, Swedish, and Danish delegations, was chosen as the host country for the intergovernmental conference.<sup>79</sup> According to Marcel Golay, “[A]ll participants seemed to be aware that it would be in their interest to put forward the name of Switzerland as a symbol of the non-political activities of the future organization.”<sup>80</sup> What Golay did not mention was that Switzerland’s interest in keeping the future organization neutral would leave the scientists in charge and protect them from interference by the nation-states in the shaping and running of the organization, but at the cost, as the future would show, of more limited national participation in ELDO.

In July 1960, the Swiss government took over the negotiations that the scientists had handled up to that time.<sup>81</sup> It examined more carefully than ever the consequences of a European space research organization for the country’s neutrality policy. In a detailed report, it outlined once again the convergence of interest between the scientific community and the Swiss authorities in preventing political and military interference:

<sup>73</sup> Krige and Russo, *A History of the European Space Agency* (cit. n. 63), 44; John Krige, “NATO and the Strengthening of Western Science in the Post-Sputnik Era,” *Minerva* 38 (2000): 81–108.

<sup>74</sup> Marcel Golay, “Recherche spatiale: Rapport relatif à la conférence de Londres,” n.d. [May 1960], annexed to his letter to Max Petitpierre, 5 May 1960, E 2003 (A) 1971/44, vol. 94, BAR.

<sup>75</sup> *Ibid.*

<sup>76</sup> Royal Society, “Western European Space Research Meeting” (cit. n. 72).

<sup>77</sup> *Ibid.*

<sup>78</sup> Bernard Barbey to Jean de Rham, 18 May 1960, E 2003 (A) 1971/44, bd. 94, BAR.

<sup>79</sup> “Rapport sur la réunion de Paris des 23 et 24 juin 1960,” 29 June 1960, E 2003 (A) 1971/44, bd. 94, BAR.

<sup>80</sup> *Ibid.*, 5.

<sup>81</sup> Département politique fédéral to Président de la Société helvétique des sciences naturelles, 13 July 1960, E 2003 (A) 1971/44, bd. 94, BAR.

The preference to date of the scientists for a model similar to CERN corresponds to our position. This organization succeeded, in the field of fundamental research on the atom, to demilitarize and depoliticize a number of scientific activities that were previously the prerogative of the military. Today, thanks to CERN, atomic science is in large part in the public domain. An impressive number of American and Soviet scientists meet there. However—and this is essential—it is the fact that CERN was active on our territory that made it possible for this institution to play this role of intermediary between East and West.<sup>82</sup>

Thus according to the Swiss government, not only could its participation in an international scientific cooperation project be made compatible with its neutrality policy, but also the latter would serve scientific cooperation well by guaranteeing that it was depoliticized and demilitarized—neutral, in other words.

Switzerland was not alone in holding these views. The Swedish and Austrian delegations, for example, two other neutral countries, reasoned along the same lines. In the fall of 1960, the United Kingdom was still trying to promote the use of its recycled launcher Blue Streak, stripped of its military characteristics, but experienced only incomplete success.<sup>83</sup> Sweden refused the proposition outright,<sup>84</sup> aware of the political risks inherent in international cooperation in the field of launchers as a dual-use technology, and Switzerland opposed the proposition, too. Switzerland's decision was also motivated by the fact that Swiss industry believed the investments in space launchers to be insufficiently profitable, and the military had no interest in developing missiles, preferring to keep in touch with space research merely "to appreciate the potential threat coming from space."<sup>85</sup> As a result of Switzerland's, Sweden's, and other countries' opposition to the British plans, the delegations decided to create two distinct organizations. The European Space Research Organization (ESRO) would be devoted exclusively to space research and would include ten European countries.<sup>86</sup> The European Space Vehicle Launcher Development Organization (ELDO), by contrast, would be devoted to the development of a launcher and would include only six European countries, plus Australia. Austria, Sweden, and Switzerland, all small neutral countries, were absent from ELDO.

Switzerland's efforts at depoliticizing and demilitarizing space research were not as successful as they were in the case of high-energy physics. On the one side, the size of the investments and the military and commercial importance of launchers stood in the way of Switzerland's and other neutral countries' diplomacies. Moreover, these particular aspects of space research remained too tied to political and military interests to be made compatible with Switzerland's neutrality policy. The Swiss government therefore tried to preserve the country's participation in European space research by advocating a split between launchers (ELDO) and satellites (ESRO) in

<sup>82</sup> "Rapport au Conseil fédéral sur la nécessité d'une organisation européenne pour la recherche spatiale et sur l'intérêt pour la Suisse d'y participer," 22 July 1960, 11, E 2003 (A) 1974/52, vol. 153, BAR.

<sup>83</sup> The Swiss government received a confidential memo on this topic 2 Sept. 1960; "Note pour le dossier," 15 Sept. 1960, E 2003 (A) 1971/44, vol. 95, BAR.

<sup>84</sup> "Note pour Monsieur le Ministre de Rham," 18 Oct. 1960, E 2003 (A) 1971/44, bd. 94, BAR.

<sup>85</sup> "Rapport du DMF du 8 Mai 1962 à l'appui de la proposition du DPF du 30 Avril 1962," 8 May 1962, E 2003 (A) 1971/44, bd. 94, BAR.

<sup>86</sup> Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden, Switzerland, and the United Kingdom.

two separate organizations. In this way, Switzerland could at least join the neutralized ESRO. On the other side, the fact that satellites, unlike nuclear research, were not perceived as dual-use technology meant that it was unnecessary to publicly affirm their neutrality by locating any of the ESRO institutions on Swiss ground. Indeed, Switzerland could not land any of the ESRO research laboratories. However, at least it succeeded in ensuring that European space research did not take place under the framework of NATO or the European Communities, something it had feared early on, and which would have made Switzerland's participation in any way impossible.<sup>87</sup>

Switzerland was satisfied with the neutrality of ESRO, as it embodied three mechanisms to prevent militarization of any kind. In April 1962, Switzerland's new foreign minister, Friedrich T. Wahlen, shared his thoughts about this delicate issue with his Swiss ambassador in Paris:

It is obvious that with the new weapons, the scientists and the military work in the same fields and as a result, a definition and exact delimitation of their programs is a necessity. In the case of CERN, it is inconceivable that their programs could be inspired by military considerations, since all the results of studies on the atom must be published. CERN is, as it is customary to say, a glass house. . . . In the case of ESRO, any state who thinks that the program diverges from the objectives of the conventions can veto the budget, since it has to be adopted unanimously. It is true that it could be difficult in practice to determine if one experiment or the other is really devoid of military preoccupations. We cannot exclude that certain powers—even against the opinion of their scientists—could use this European organization to increase their strategic potential, through indirect ways difficult to detect. Our representatives must thus be vigilant, and a way to achieve this is through the possibility and the right of every nation to have its own citizens participate in any experiment carried out by ESRO. But besides this assurance, there is another guarantee—the most efficient perhaps—against such tendencies, namely the publication of all the experimental results. The secrecy required by military experiments would be irreconcilable with this publication, which is a principle of ESRO. The necessary vigilance is the common concern of the member states most directly concerned, Switzerland, Sweden and Austria.<sup>88</sup>

Thus space research involving satellites, and not linked to launchers, could be made neutral using the criterion of open publication as a benchmark for basic “non-military” research, as with CERN.<sup>89</sup> In addition, the absence of the United States and of Eastern European countries and the USSR, and their potentially polarizing effect, as well as the presence of neutral countries, offered a good chance that ESRO would be exclusively following scientific goals, as the European scientists, and the Swiss authorities, had wished. This solution avoided “the unpleasant intervention” of the United States in European space that the European scientists had feared because of the “strategic importance of this field.” At the same time, it fulfilled their desire to keep “a complete independence from the Soviet Union in order not to compromise the essentially scientific goals” of ESRO.<sup>90</sup> European scientists and Swiss federal authorities could not agree more completely.

The country's participation in space research thrilled the Swiss media. The media saw it as particularly in tune with several aspects of Switzerland's national identity.

<sup>87</sup> “Rapport au Conseil fédéral” (cit. n. 82), 10.

<sup>88</sup> Friedrich T. Wahlen to Agostino Soldati, 14 April 1962, E 2804 1971/2 bd. 44, BAR.

<sup>89</sup> On the flexible definition of what counts as a military technology, see Krige, “What is ‘Military’ Technology?” (cit. n. 65).

<sup>90</sup> Golay, “Recherche spatiale” (cit. n. 74).

For example, space research would involve the development of high-precision miniaturized devices to be embarked on satellites, a special field of expertise of the Swiss watchmaking industry and a subject of national pride.<sup>91</sup> Switzerland's participation in European space research was also understood as an unusual opportunity for its neutrality—that is, “independent of both the American and the Soviet blocs,” thus making uniquely European collaboration possible.<sup>92</sup> Space research caught the imagination of the media, which came to envision “Swiss citizens on the moon!”<sup>93</sup> The Swiss authorities' diplomatic efforts in the field of space research thus helped position the country's national identity not only in foreign relations but also domestically, as the extensive and enthusiastic media coverage demonstrates.<sup>94</sup>

#### MOLECULAR BIOLOGY: AN EASY CASE FOR INTERNATIONAL COOPERATION

The explosion of the first atomic bomb over Hiroshima in 1945 and the launch of Sputnik in 1957 played decisive roles in setting the science policy agenda in the industrialized nations. The impact of these two events proved all the greater in that both were linked to warfare technologies and commercial opportunities. Physicists were most successful in mobilizing these different interests and translating them into massive support for physical science research.<sup>95</sup> CERN and ESRO/ELDO are just two examples reflecting these changing science and technology policy priorities in the cold war.

Until the 1960s, there were no events comparable to Hiroshima or Sputnik that reoriented the national scientific priorities in favor of the life sciences. Only decades after James Watson and Francis Crick's 1953 discovery of the DNA double helix was this event remembered as the starting point of a new scientific discipline.<sup>96</sup> However, in the early 1960s, it was becoming increasingly perceptible that a deep transformation was taking place in the understanding of life and disease, as a new discipline called “molecular biology” was progressively redefining the avant-garde of biological research.<sup>97</sup> Significantly, a number of researchers working under this banner were physicists converted to the study of life. Beginning in 1958, a growing number of local research institutions created new departments of molecular biology.<sup>98</sup> In 1962, the Nobel Prize in Chemistry and the Nobel Prize in Physiology or Medicine were awarded to five researchers in the field of molecular biology, three of whom were physicists, adding to the growing prestige of this new discipline.

In December 1962, on their way back from Stockholm where they had received

<sup>91</sup> Ibid.

<sup>92</sup> “Le Centre européen de recherche spatiales est un projet pacifique auquel la Suisse participe,” *La Tribune de Genève*, 23 June 1960, 21.

<sup>93</sup> “Des Suisses . . . sur la lune!,” *Le Genevois*, 10 Dec. 1960, 1.

<sup>94</sup> For a detailed analysis of the press in the Swiss-German context, see Zellmeyer, *A Place in Space* (cit. n. 63).

<sup>95</sup> Daniel J. Kevles, *The Physicists: The History of a Scientific Community in Modern America*, 2nd ed. (Cambridge, Mass., 2005).

<sup>96</sup> Bruno J. Strasser, “Who Cares about the Double Helix?” *Nature* 422 (2003), 803–4.

<sup>97</sup> On molecular biology in postwar Europe, see Bruno J. Strasser and Soraya de Chadareian, eds., *Studies in History and Philosophy of Biological and Biomedical Sciences* 33 (2002); Soraya de Chadareian, *Designs for Life. Molecular Biology after World War II* (Cambridge, UK, 2002); Jean-Paul Gaudillière, *Inventer la biomédecine: La France, l'Amérique et la production des savoirs du vivant, 1945–1965* (Paris, 2002); Strasser, *La fabrique* (cit. n. 53).

<sup>98</sup> Bruno J. Strasser, “Institutionalizing Molecular Biology in Post-War Europe: A Comparative Study,” *Stud. Hist. Phil. Biol. Biomed. Sci.* 33 (2002): 533–64.

their Nobel Prizes, James Watson (physiology or medicine) and British crystallographer John Kendrew (chemistry) stopped by CERN.<sup>99</sup> In a discussion among Watson and Kendrew and American physicist Leo Szilard and CERN director Victor Weisskopf, Szilard suggested that European molecular biologists also try to convince European governments to fund an international laboratory modeled on CERN. In September 1963, a small group of European researchers founded the European Molecular Biology Organization (EMBO) to foster molecular biology in Europe by, for example, creating an international laboratory modeled on and located close to CERN.<sup>100</sup> However, for reasons to be explored later, this venture was not received with great enthusiasm by European governments, lacking as it did the political urgency and military resonances of high-energy physics and space research. The Swiss physicist turned molecular biologist Eduard Kellenberger, a student of Paul Scherrer's and the Swiss representative to the newly born EMBO Council, persisted in bringing molecular biology to the Swiss political agenda.<sup>101</sup> He took the initiative in making EMBO a private organization under Swiss law, which would later facilitate negotiations with the Swiss federal government. Indeed, the Swiss Department of Foreign Affairs decided to support EMBO's plans, and in 1966, Switzerland convened an intergovernmental meeting that led to the signing, in February 1969, of a convention creating the European Molecular Biology Conference (EMBC), including representatives of the twelve Western European nations.<sup>102</sup> In 1974, the EMBC came to an agreement to fund the European Molecular Biology Laboratory (EMBL), which eventually opened in Heidelberg in 1978.

In April 1964, the new Swiss foreign minister, Friedrich T. Wahlen, received a document with the puzzling title "What Is Life? A New Organization for Biological Research in Europe."<sup>103</sup> It had been sent by Eduard Kellenberger, as the Swiss representative to the EMBO Council, who informed the minister about the plans for his new organization. Wahlen took an immediate interest in the EMBO plans<sup>104</sup> and proposed that Switzerland take the diplomatic lead to support it.<sup>105</sup> Wahlen, with his background in agricultural science, had a keen interest in biology. Furthermore, between 1949 and 1958, he had been director of the Agriculture Department of the Food and Agriculture Organization (FAO), a United Nations affiliated entity, giving him a significant experience in international organizations. The FAO represented the kind of organization that Max Petitpierre, Wahlen's predecessor, had defined as "technical" and which was therefore compatible with Switzerland's neutrality. The Department of Foreign Affairs also justified its interest in EMBO by pointing to the rapidly changing scientific priorities of the cold war:

<sup>99</sup> On the history of EMBO and EMBL, see John Krige, "The Birth of EMBO and the Difficult Road to EMBL," *Stud. Hist. Phil. Biol. Biomed. Sci.* 33 (2002): 547–64; Bruno J. Strasser, "The Transformation of the Biological Sciences in Post-War Europe," *EMBO Reports* 4 (2003): 540–43.

<sup>100</sup> Krige, "Birth of EMBO" (cit. n. 99).

<sup>101</sup> On Kellenberger, see Bruno J. Strasser and Jacques Dubochet, "Eduard Kellenberger (1920–2004)," *Nature* 433 (2005), 817.

<sup>102</sup> Austria, Denmark, France, Germany, Greece, Italy, the Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

<sup>103</sup> Edouard Kellenberger to Friedrich T. Wahlen, 27 April 1964, E 2003 (A) 1987/29, vol. 185, BAR.

<sup>104</sup> Edouard Kellenberger to Max Perutz, 4 July 1964, EMBO Archives, Heidelberg.

<sup>105</sup> "Minutes of the Meeting of Council held at CERN, Geneva, on 12 July 1964," 12 July 1964, EMBO Archives, Heidelberg.

Since atomic energy has entered the stage of industrial accomplishments and the NASA “moon-crash-program” will most likely be carried out, all responsible parties should, as of now, make efforts to reduce, or at least find ways to continue employing the scientific workforce of the country. From this perspective, the EMBO initiative could be very useful for keeping pace for once with the USA.<sup>106</sup>

Other European nations were much less enthusiastic about a centralized laboratory for the life sciences. They cast some doubt on the necessity of centralizing resources in the field, because unlike high-energy physics or space research, molecular biology did not require any unique pieces of heavy equipment, such as cyclotrons or rockets, that would be too expensive for a single smaller country to develop. An international laboratory might also deplete the country of its elite scientists.<sup>107</sup> Finally, molecular biology did not seem very promising commercially or militarily. This last point, perceived as a disadvantage of the field by some nations, was thought of as a great opportunity by Switzerland. The absence of military or political interests in molecular biology would ease greatly Switzerland’s efforts at inscribing EMBO’s plans into its current neutrality policy.

Switzerland supported EMBO without any of the hesitations that had characterized its earlier involvement in international scientific cooperation. However, the Swiss government was not the only political institution to identify the possible advantages of collaborating in the field of molecular biology. As a representative of the OECD would put it in May 1965, cooperation in the field of the life sciences “is relatively easy, because, on one side it doesn’t raise delicate political or economic problems, and on the other, its development—even through international cooperation—does not require very substantial investments.”<sup>108</sup> UNESCO, which had played a leading role for CERN, proposed in 1965 to reiterate its efforts for EMBO and convene an intergovernmental meeting the following year. At the same time, the European Council decided to do the same. The OECD and the WHO considered taking similar action, as did Switzerland.<sup>109</sup>

The EMBO Council was wary about these different organizations and declared its willingness “to maintain a complete independence of UNESCO and other similar organizations on political as well as administrative questions.”<sup>110</sup> They emphasized the risks resulting from the patronage of international organizations, such as “political pressure on the choice of scientific personnel and lack of interest in a research program in fundamental biology.”<sup>111</sup> Privately, the EMBO Council members were very favorable to Switzerland’s initiative, even if they decided not to show their preferences publicly or to turn down the other offers.<sup>112</sup>

Swiss diplomacy was confronted, on the surface at least, with strong competition from international organizations that had the advantage of already having governmental-level representations from the EMBO member states. Switzerland made serious efforts to keep the lead in this process, especially since, as in previous

<sup>106</sup> G. Pnett, “Mitteilung,” [mid-Sept. 1965], E 2003 (A) 1978/29, vol. 185, BAR.

<sup>107</sup> Krige, “Birth of EMBO” (cit. n. 99).

<sup>108</sup> OECD, *Problems of International Scientific Co-Operation—International Co-Operation in Biology—The Problem of Choice*, 27 May 1965, 28, EMBO Archives.

<sup>109</sup> Strasser, “Transformation of the Biological Sciences” (cit. n. 99).

<sup>110</sup> “Minutes of the Meeting of Council held at CERN” (cit. n. 105).

<sup>111</sup> “Meeting of EMBO Council at Geneva on 2 Feb. 1964,” 2 Feb. 1964, EMBO Archives.

<sup>112</sup> “Minutes of the Meeting of Council held at CERN” (cit. n. 105).

collaborative efforts, it had a precise idea about what political contours the organization should take to conform to Switzerland's neutrality policy of the 1960s. Indeed, by that time, Switzerland had clearly found its place in Western Europe, even though it remained highly suspicious of any convergence with Atlantic positions.<sup>113</sup> It was also making significant efforts to become closer to its European neighbors in the European Economic Community, without considering joining the Community, however, especially after the failure of the larger European Free Trade Association in 1959.<sup>114</sup> In 1963, for example, Switzerland joined the European Council, after having refused to do so in 1949.<sup>115</sup>

As a result of Switzerland's new understanding of its neutrality policy, it privileged international cooperation with Western European nations, and actively tried to avoid any other political configuration. It opposed UNESCO, for example, which favored an organization open to all European nations, East and West, reversing the position it had adopted earlier in the case of CERN.<sup>116</sup> It also asked the EMBO Council not to seek financial support from the Ford Foundation or other American funding agencies to prevent any sign that it was an Atlantic organization.<sup>117</sup> The Swiss Department of Foreign Affairs vigorously defended its position to strictly limit membership to Western Europe, thus excluding Israel, even though Israeli scientists had been founding members of EMBO.

In 1966, an independent event reminded the Swiss authorities that they had much to lose politically if they were unable to guide European scientific cooperation in the field of molecular biology along their own agenda: the Italian government proposed to reactivate an older NATO project for a European institute of science and technology modeled after MIT<sup>118</sup> and designed to include a department of molecular biology. This proposition provoked a stir in the Swiss Department of Foreign Affairs. An internal note spelled out some of the political consequences of the Italian proposition for Switzerland's neutrality policy:

The motivation for this action—besides the strengthening of NATO—lies in the correct conclusion that the widening technological gap between the United States and Europe could also widen proportionally the political differences between the two continents. A preliminary inspection reveals several adverse prospects. The neutrals will have to be very careful in order not to be caught by surprise and pushed aside by politically inspired scientific plans. The danger lies in a repetition of the experience of the European Economic Community, in a different universe, but with the same divisive result (there: at-

<sup>113</sup> Jakob Tanner, *Grundlinien der schweizerischen Aussenpolitik seit 1945* (Bern, 1993).

<sup>114</sup> Antoine Fleury, "La Suisse: Le projet de grande zone de libre échange et la création de la CEE," in *Il rilancio dell'Europa e i trattati di Roma*, ed. Enrico Serra (Milan, 1989), 355–76. On NATO in science, see Krige, *American Hegemony* (cit. n. 8), chap. 8; and Krige, "NATO and the Strengthening of Western Science" (cit. n. 73).

<sup>115</sup> Fleury, "La Suisse et le conseil de l'Europe" (cit. n. 61), 151–65.

<sup>116</sup> At the time of the CERN negotiations, Switzerland was still considering including countries of Eastern Europe, in line with UNESCO's universalist perspective; but by the early 1960s, the country had clearly aligned itself with Western Europe, making UNESCO's proposal politically unacceptable.

<sup>117</sup> Jeffrey Wyman, "Notes on Discussion at Swiss Department of Foreign Affairs," 17 Jan. 1966, Eduard Kellenberger private archives. On the Ford Foundation in Europe, see Krige, *American Hegemony* (cit. n. 8), chap. 6.

<sup>118</sup> Giuliana Gemelli, "Western Alliance and Scientific Diplomacy in the Early 1960s: The Rise and Failure of the Project to Create a European MIT," in *The American Century in Europe*, ed. R. Laurence Moore and Maurizio Vaudagna (Ithaca, N.Y., 2003), 171–92.

tempts to unify Europe through the economy, here: attempt to strengthen NATO through science).<sup>119</sup>

As a consequence of this reasoning, the Department of Foreign Affairs decided to move ahead more energetically than ever, taking the risk of clashing with the international organizations, such as UNESCO, which had similar plans. Switzerland rushed to consult all European governments and issued an invitation for an intergovernmental conference, to take place in September 1966, on international cooperation in the field of molecular biology. Only countries already members or observers at CERN were invited to participate. In a letter of protest, the director of UNESCO “deplored” the action of the Swiss government and expressed regret that the invitation had only been addressed to CERN members.<sup>120</sup> The Swiss foreign minister was somewhat relieved by this reaction, as he had feared a worse, even a “hostile,” reaction of UNESCO.<sup>121</sup> By 1969, the conference organized by Switzerland led to the signing of a convention by twelve Western European countries creating the EMBC, an intergovernmental funding body for EMBO, and leading to the creation, in 1974, of the European molecular biology laboratory in Heidelberg.

Even though Switzerland did not succeed in obtaining the central laboratory, it was able once again to shape the political contours of the organization and to bring it in line with its neutrality policy of the 1960s. As with its leadership in the development of CERN and ESRO, Switzerland’s active role in the creation of the EMBC and its participation in all three organizations demonstrated better than any discourse could that neutrality was neither an isolationist policy nor a pretext to escape international responsibilities. As an internal memo of the Foreign Department made clear, this was precisely Switzerland’s agenda before embarking on the EMBO projects: “We should seize the great opportunity of a European science policy initiative [the EMBO project] to refute our alleged selfish isolationism.”<sup>122</sup> The participation in international scientific cooperation in the field of molecular biology was an ideal way to dispel the impression that neutrality amounted to political isolationism. Neutrality would be pursued as a coherent policy to create a space free from military or political interference, a space that would benefit not only international negotiations aimed at conflict resolution, for example, but also the pursuit of scientific research in an international setting. Thus with the EMBO project, the Swiss authorities strove to sustain the neutrality of science and, at the same time, to reinforce the neutrality of its national identity. Admittedly, the case of molecular biology was far easier than that of atomic physics or space research, as molecular biology was not linked to sensitive military technologies. Nevertheless, the EMBC could have been structured in a quite different political framework had it been shaped by organizations such as UNESCO and the OECD. Although a different structure would not have forbidden Switzerland’s participation, it would have at least made this organization much less useful as an expression of the current meaning of Switzerland’s neutrality policy.

<sup>119</sup> “Projekt Fanfani (wissenschaftlich-technologischer Marshall-Plan),” 29 Oct. 1966, E 3375 (A) 1992/25, vol. 9, BAR.

<sup>120</sup> Alfred Rappard to Division des Organisations Internationales, 7 April 1966, E 2003 (A) 1978/29, vol. 185, BAR.

<sup>121</sup> Ernst Thalmann to Max Perutz, 9 Dec. 1966, EMBO Archives.

<sup>122</sup> “Einladung der Schweiz zur Gründung einer europäischen Organisation für Molekular-Biologie,” 30 Aug. 1966, E 2003 (A) 1978/29, vol. 185, BAR.

## CONCLUSION

The neutrality of science and the state have never been givens; rather they represent a process of negotiation taking place in historically specific contexts, aimed at deflecting particular political forces. In cold war Europe this context included the political and ideological commitments of the nation-states in the divide between East and West, and their interest in building strong military defense programs underpinned by science and technology. States such as Switzerland defined being neutral as being permanently engaged in the process of finding a path along the delicate line balancing the necessity of active involvement in international affairs and the refusal to commit to political alliances aimed at shifting balances of power. Given the paramount importance of political alliances of all kinds in international affairs, the Swiss government was hard pressed to find domains that could be made to fit this agenda. Scientific cooperation was one of these domains, along with cultural, humanitarian, and social cooperation. By actively attempting to depoliticize and demilitarize these international scientific organizations, Switzerland could affirm publicly how much it cared about its neutrality policy. These actions were not cynical manipulations of the neutrality idea. The Swiss believed them to be expressions of what neutrality historically stood for and attempts to ground it in tangible institutions. Thus it was precisely when science was the least neutral, as in the case of high-energy physics and space research, that it would best serve the assertion of the country's national identity built around the idea of neutrality.

The three examples of scientific cooperation discussed here illustrate how in the decades following the Second World War, the Swiss authorities considered science an opportunity to participate in international affairs and reinforce the credibility of the nation's neutrality policy. Science could serve this purpose only if it were made neutral, something that proved relatively simple in the case of molecular biology, more difficult for nuclear physics, and almost impossible for space research, except when a sharp institutionalized distinction could be made between satellites and launchers. It is a measure of Switzerland's success that the complex negotiations between scientists and statesmen from different countries finally led to the creation of institutions that have, in fact, been considered neutral by all parties and dominated by the scientists' agendas. This was a remarkable achievement in the cold war, during which state support for large-scale research, for example in the United States national laboratories, was generally subservient to the attainment of practical goals of military or economic interest. Nobel prizes awarded to scientists working for CERN and EMBL demonstrate that these organizations hosted fundamental research at the highest level of scientific excellence. In the same time period, the scientific failure of EURATOM, created in 1957 to stimulate research on nuclear energy among members of the European Economic Community, showed where an excessive politicization of scientific research could lead.<sup>123</sup>

Switzerland was not alone in defending the neutrality of European scientific cooperation, as other neutral and non-neutral countries shared similar views, but it did play a leading role in this respect. Its strongest ally throughout the negotiations re-

<sup>123</sup> Michel Dumoulin, Pierre Guillen, and Maurice Vaisse, eds., *L'Energie nucléaire en Europe: Des origines à euratom* (Bern, 1994). EURATOM's scientific failure does not imply it was not a successful political weapon; see John Krige, "The Peaceful Atom as Political Weapon: Euratom and American Foreign Policy in the Late 1950s," *Historical Studies in the Natural Sciences* 38 (2008): 5–44.

mained the European scientists themselves, for whom the fight for neutrality was also a fight for scientific leadership in these organizations. During the CERN negotiations, a Swiss politician could acknowledge that “these great physicists are diplomats far more skillful than we are.”<sup>124</sup> The convergence of interest between European scientists and neutral states was perhaps the strongest driving force that led to the depoliticizing and demilitarizing of these scientific organizations.

Public debates about Switzerland’s participation in international scientific organizations, in the press as well as in the parliament, often revolved around the question of Switzerland’s political neutrality. Indeed, Switzerland’s neutrality was not only a useful fiction employed by the government for defending its foreign and economic policies but also a central tenet of the nation’s identity. “Neutrality is the people’s business, not the government’s or the parliament’s,” emphasized Max Petitpierre in 1957.<sup>125</sup> By participating in international scientific cooperation and defending the neutrality of science, the Swiss government could demonstrate to other nations, as well as to its own citizens, what political neutrality stood for. Swiss scientists took pride in the fact that their country hosted these international scientific organizations and, moreover, that these institutions were neutral and devoted to peaceful research only, following the wishes of the scientific community. CERN, in particular, along with the International Committee of the Red Cross, became for Swiss citizens part of their country’s national identity, embodying its neutrality, and at the same time, its participation in world affairs. When the Swiss government presented the ESRO agreement in front of the parliament in 1962, it made the link clear—“our participation in ESRO follows our solidarity policy”—an essential part of the country’s neutrality posture for Petitpierre.<sup>126</sup> Neutrality, its supporters argued, was intrinsic to Switzerland’s openness toward the rest of the (free) world, and not just a self-serving policy aimed at defending a small country’s economic and political interests. The putatively neutral, universal, and objective value of science was ideally suited to make this point.

<sup>124</sup> Albert Picot, “Le laboratoire scientifique européen de recherches nucléaires,” 21 April 1952, E 2001-04(-) 1970, vol. 346, BAR.

<sup>125</sup> Petitpierre, “Conférence donnée” (cit. n. 13).

<sup>126</sup> *Feuille Fédérale* 2 (1962): 325–51, on 341.