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The Politics of Noncooperation:
The Boycott of the International Centre for Theoretical Physics

By Alexis De Greiff[*]

ABSTRACT

In 1974, the General Conference of UNESCO approved three resolutions condemning Israel. In retaliation, a group of physicists promoted a boycott of the International Centre for Theoretical Physics (ICTP), an institute created to foster collaboration in theoretical physics between industrialized and third world countries and partly supported by UNESCO. This political action against the "politicization" of UNESCO was led by American and Israeli scientists. I show that the position toward the boycott was very different among European scientists. I shall argue that the boycott of the ICTP was motivated as much by the formal connection between UNESCO and ICTP as by the identification of the ICTP with the third world, which was blamed for the "exclusion" of Israel from UNESCO. The episode reflects the contradictions and workings of scientific noncooperation. It also reveals the limits of scientific internationalism in the second half of the twentieth century. In this context, I investigate the meaning ascribed by the actors to the term the "politicization of science."

INTRODUCTION

Soon after its creation in 1964, the International Centre for Theoretical Physics (ICTP) became the best-known institution in which third world physicists came to have access to the latest developments in their field and had the chance to do research. Between 1964 and 1980, more than 6,000 scientists from the developing countries (and a sim-

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ilar number from industrialized countries) visited the ICTP. It was located in Trieste, and its deputy-director was a scientific diplomat from that city, Professor Paolo Budinich.[1] The central actor of the ICTP's early history was, however, Professor Abdus Salam, its first director. Born in the region of British India that would later become Pakistan, Salam read mathematics and physics at Cambridge. In 1958, he became the first professor of theoretical physics at Imperial College. In 1979, he was awarded the Nobel Prize for physics. Under his leadership, the ICTP became a reference point for scientists in developing countries as the model of international scientific collaboration for third world development, and Salam perhaps the most famous spokesperson of the "science for development" ideology amongst political and scientific milieus in both developing and industrialized countries.

In its early years, the ICTP operated under the auspices of the International Atomic Energy Agency (IAEA), a United Nations technical agency, and also had substantial financial support from the Italian government. In 1970, UNESCO joined the IAEA in the operation. The collaboration of the United Nations Educational, Scientific and Cultural Organization (UNESCO) proved vital to the survival of the center, whose financial condition was always precarious. Although Salam did not like UNESCO's tutelage in the ICTP's early years, by 1970, there were few alternatives for increasing the center's finances. Even then, the sense of instability continued, for although the agreement with UNESCO brought more resources, its future plans continued to be subjected to periodic approvals.[2] What is more, the center became ensnared in a major political confrontation inside UNESCO that almost destroyed it.

In the mid-1970s, tension in the Middle East put international cooperation with the third world in serious jeopardy. Three "anti-Israeli" resolutions approved in the 1974 UNESCO General Conference sparked a massive boycott against the international organization and, as a result of its association, against the ICTP as well.[3] This was led by American and Israeli scientists who believed that UNESCO and, by ricochet, Salam's institute were failing to respect their international callings and had become politicized and beholden to radical groups determined to attack Israel wherever and however they could.

"A boycott is a particular form of sanction against a country or a group in order to

[1] Alexis De Greiff, "The Tale of Two Peripheries: The Creation of the International Centre for Theoretical Physics in Trieste," *Historical Studies in the Physical and Biological Sciences* 33 (2002): 33–59; idem, "The International Centre for Theoretical Physics, 1960–1979: Ideology and Practice in a United Nations Institution for Scientific Co-Operation and Third World Development" (Ph.D. diss., Univ. of London, 2002).

[2] In November 1974, a committee presided over by CERN theoretical physicist Leon Van Hove stated that "a feeling of uncertainty concerning the future of the Centre is rampant, both among its scientific leaders and its administrative staff" and recommended the allocation of *stable sources* of income because "the staff should be given a highest security of position." IAEA, "Report of the Ad Hoc Consultative Committee of the International Centre for Theoretical Physics, Trieste, to the Director General of the International Atomic Energy Agency and the United Nations Educational, Scientific and Cultural Organisation" (Paris, 1975).

[3] UNESCO was one of the most interesting and active international organizations aimed at promoting cultural and scientific cooperation. However, critical works on its political, cultural, and scientific activities are scarce. (See Aant Elzinga, "Introduction: Modes of Internationalism," and idem, "Unesco and the Politics of Scientific Internationalism," in *Internationalism and Science,* ed. Aant Elzinga and Catharina Landström [London, 1996], 3–20 and 89–131.) In spite of its importance for the history of UNESCO, there is only one scholarly study devoted to the so-called Israel Resolutions and the boycott that followed, written from the international relations perspective: Clare Wells, *The UN, UNESCO, and the Politics of Knowledge* (London, 1987). Histories of UNESCO have systematically ignored the issue. Fernando Valderrama. *A History of UNESCO* (Paris, 1995).

pressure some change." It is based on a theory of action that identifies a relationship between the isolation of the target and the desired goal.[4] This phenomenon, as part of international politics, is relatively new. In the history of science, the best-known case concerns the isolation of German and Austrian intellectuals after the Great War. The chauvinistic stances adopted by scientific intellectuals on both sides of the trenches broke down the kind of scientific internationalism that had prevailed since circa 1870. As Forman has shown, scientific internationalism—like nationalism—is always a political stance.[5] Boycotts act as a negation of scientific internationalism. Yet despite potential interest in the international relations of science, the literature on scientific boycotts is practically nonexistent, especially in the period after World War II.[6]

This chapter tackles three related issues regarding a scientific boycott. The first concerns the organization of the boycott as well as the criteria and reasons scientists have to boycott certain institutions as opposed to others. I shall argue that the motivations for the boycott concerned essentially the image of the ICTP as a center for third world development rather than as a research institution. Such motivations never, or almost never, arose in an explicit way. Thus the boycott will allow us to investigate how the scientific community reacted when the center was trapped by a major crisis in UN politics and to scrutinize the workings of scientific internationalism in the second half of the twentieth century.

The second issue concerns the manner in which the boycotting scientists moved the boundary between science and politics to suit their interests and ideologies. Such boundary work served as a basis to defend Mertonian norms such as the need to keep science free from politics and the identification of science with the values of Western democracies.[7] I suggest that those opposing the "politicization of science" not only sought to keep international scientific institutions politically neutral but also purported to define "ideologically correct" science in the context of international exchange of scientific knowledge.[8]

The third issue concerns the manner in which the center handled the boycott, ex-

[4] Lorraine J. Haricombe and F. W. Lancaster, *Out in the Cold: Academic Boycotts and Isolation of South Africa* (Arlington, Va., 1995), 1–2.

[5] Paul Forman, "Scientific Internationalism and the Weimar Physicists: The Ideology and Its Manipulation in Germany after World War I," *Isis* 64 (1973): 151–80. See also Catharina Landström, "Internationalism between Two Wars," in Elzinga and Landström, *Internationalism and Science* (cit. n. 3), 54; and Daniel Kevles, "'Into Hostile Political Camps': The Reorganization of International Science in World War I," *Isis* 62 (1971): 47–60.

[6] Perhaps the only exception is the sanctions against the racist regime in South Africa (Haricombe and Lancaster, *Out in the Cold* [cit. n. 4]). The effects of the boycott upon South Africa are a source of major debates. Some authors have studied the activities of the boycotting activists, concluding that sanctions alone do not guarantee the desired effects. (P. Wallensteen, "Characteristics of Economic Sanctions," in *A Multi-Method Introduction to International Politics,* ed. W.D. Coplin and C. W. Kegley, [Chicago, 1971], 128–54; M. P. Doxey, *International Sanctions and International Enforcement* [New York, 1980]). Others criticize scientific collaboration because science and scientists are pivotal for the prolongation of the racist government (Yngve Nordvelle, "The Academic Boycott of South Africa Debate: Science and Social Practice," *Studies in Higher Education* 15 [1990]: 253–72).

[7] See Robert K. Merton, "Science and Technology in a Democratic Order," *Journal of Legal and Political Sociology* 1 (1942): 115–26. On the relation of boundary work to Merton's norms, see Thomas F. Gieryn, "Boundaries of Science," in *Handbook of Science and Technology Studies,* ed. Sheila Jasanoff, James C. Petersen, Trevor Pinch et al. (Thousand Oaks, Calif., 1995), 393–443. See also idem, *Cultural Boudaries of Science: Credibility on the Line* (Chicago, 1999).

[8] Michael Gordin, Walter Grunden, Mark Walker, and ZouYue Wang, "'Ideologically Correct' Science," in *Science and Ideology: A Comparative History,* ed. Mark Walker (London, 2003), 35–65.

ploring Salam's strategies to use the boycott to stabilize the center financially. As we shall see, despite the disruption it caused, the boycott itself provided Salam with an instrument to negotiate successfully with UNESCO and to ensure financial support from the organization.

THE UNESCO RESOLUTIONS: THE "NOVEMBER DIPLOMATIC REVOLUTION"

In the years between 1950 and 1970, decolonization gave the United Nations (UN) and its technical agencies a new composition. The emergence of a new majority, and the controversial character of some of the issues it raised, became a source of high tension within the system. The UN was transformed into a forum for the confrontation of the radical regimes in the third world and the former colonial countries.[9] By the end of the 1960s, the third world commanded more than two-thirds of the votes in the UN General Assembly, UNESCO, the Food and Agriculture Organization, and the World Health Organization.

The new states gained assertiveness in international scenarios under the leadership of young, charismatic revolutionaries.[10] For the first time, bloc positions and initiatives challenged the "existing institutional order."[11] The strategic alliance between some Arab states and the Pan-African movement crystallized the dreams of the Bandung Conference (1955): to unite the third world against colonizers and neoimperialists, and repressive regimes backed by the latter.

The confrontation in the UN reached a peak in 1974, after the Yom Kippur/Ramadan War, when the General Assembly and UNESCO's General Conference approved a number of resolutions against Israel and South Africa. Most of the African states developed angry anti-Israel sentiments because of Israel's close relationship with the white-dominated regimes of South Africa and Rhodesia, on the one hand, and Portugal and the United States, on the other. As an analyst pointed out in 1975, "Israel was considered too much part of the Western world. . . . [It] appeared to be virtually the fifty-first state of the United States . . . In that respect Israel seemed a piece of the West deposited in the heart of the third world."[12] This revolt against the traditional order in the UN institutional structure I call the Diplomatic November Revolution.[13]

The tone was set by the UN in New York. The General Assembly requested that the secretary general establish contacts with the Palestinian Liberation Organization "on all matters concerning the 'Question of Israel.'" Yasir Arafat was invited to address

[9] Between 1954 and 1974, the number of UNESCO member states increased from 70 to almost 130. In 1960 alone, 17 new states were admitted.

[10] Just to mention a few of the names: Egyptian Gamal Abdel Nasser, Patrice Lumumba from Congo, and Fidel Castro from Cuba.

[11] In the context of UNESCO, Wells defines it as: "matters of political representation and legitimacy," closely related to "the challenge to established patterns of resources allocation, that is, explicit questioning of the political ends which may be served by extensibly technical activity." Wells, *Politics of Knowledge* (cit. n. 3), 5.

[12] Ali A. Mazui, "Black Africa and the Arabs," *Foreign Affairs* 53 (1975): 725–42. See also Arthur Goldschmidt Jr., *A Concise History of the Middle East,* 4th ed. (Boulder, Colo., 1991).

[13] The U.S. and U.K. withdrawals from UNESCO were motivated by this kind of manifestation of anti-West movements. The "free flow of information" debate exacerbated this confrontation (see Elzinga, "Unesco and the Politics of Scientific Internationalism," [cit. n. 3], 114–5). Another instance was the confrontation around the Rio Declaration on the Establishment of a New International Economic Order (1974).

the Assembly, and a year later, in 1975, the Assembly passed a resolution condemning Zionism "as a form of racism and racial discrimination."[14] Furthermore, the PLO was admitted to the International Labour Organization (ILO), another UN agency that was increasingly opposed by the United States. Concomitantly, the UN suspended South Africa from its Assembly because of its racial policies, as a token of the quid pro quo alliance.[15]

Similarly, the 1974 UNESCO General Conference held in Paris produced two major outcomes. First, it saw the election of Amadou Mahtar M'Bow of Senegal as director-general. Second, three resolutions attacking Israel were approved. It is worth describing at least their most general points. The first Israel resolution "invite[d] the Director General to withhold assistance from Israel in the field of education, science and culture until such time as it scrupulously respects the resolution and decisions of the Executive Board and the General Conference." This referred to decisions regarding the archaeological excavations carried out by Israel at Muslim sites in Jerusalem, in violation of 1967 UN and UNESCO resolutions. The second Israel resolution was the conference's condemnation of Israel for violating the rights of the population of the occupied Arab territories to "national and cultural life." However, the bitter attacks against UNESCO originated when the United States, Canada, and Israel introduced a draft resolution asking that they be included "in the list of countries entitled to participate in the European regional activities in which the representative character of States is an important factor." On November 20, the United States and Canada were admitted, while Israel was turned down.[16] The rejection (the third Israel resolution) was interpreted as an effective exclusion of Israel from UNESCO.

The United States Department of State, through its secretary of state, Henry Kissinger, objected at once, stressing that these moves meant the "politicization of UNESCO." The *New York Times* echoed declarations of U.S. and Israeli diplomats about "the tyranny of the majority" and the UN as the "World center for Anti-Semitism," while the editorial pages denounced the way in which the Arab bloc "and its allies, on behalf of the PLO, amassed votes of vengeance against Israel."[17] Virtually without exception, the discourse of the American foreign affairs top officers and the mass media led to the identification of the "politicization of UNESCO" with the imposition of the majority, that is, the third world countries and "its allies"—the communists and the terrorist organization PLO. As Robert Jordan, an American UN research director, observed some years later, "[F]or the United States to bemoan the 'politicization' of

[14] A similar resolution had been adopted in Kampala by the Assembly of Heads of State and Government of the Organization of African Unity. For a complete version of the resolutions, see UN Doc. A/RES/3236 (XXIX), Nov. 22, 1974, and UN Doc. A/RES/3379 (XXX), Nov. 10, 1975, in J. N. Moore, *The Arab-Israeli Conflict: Readings and Documents,* abr. and rev. ed. (Princeton, 1977).

[15] The December 1975 issue of the *UNESCO Courier* advertised two studies sponsored by that agency: one on "Racism and Apartheid in Southern Africa" and another on "South Africa and Namibia and Portuguese Colonialism in Africa: The End of an Era."

[16] The draft resolution was voted in the Commission for Social Sciences, Humanities and Culture with the following results: 85 against; 2 in favor (Israel and Paraguay); 11 abstentions (Australia, Austria, Chile, China, Finland, France, Honduras, Japan, Nepal, Switzerland, Uruguay). The socialist countries voted against, and many European countries were not present in the room at the time of the vote; see Moore, *The Arab-Israeli Conflict* (cit. n. 14).

[17] "Kissinger Role on U.N. Force Related," *New York Times,* Dec. 1, 1974, 14. The following day, the editorial reported that "the Arab bloc and its communist and African allies ha[d] succeeded in politicizing heretofore non-political UNESCO" (Editorial, "P.L.O. vs. UNESCO," *New York Times,* Nov. 23, 1974, 30).

UNESCO (or ILO) is merely a way of saying that U.S. influence has been on the wane."[18] The United States declared that it would stop paying its contribution to UNESCO if the resolutions were not lifted.[19] France and Switzerland, in spite of their ambiguous positions during the General Conference, stated similar intentions.[20] Director-General M'Bow replied to the attacks by pointing out that Israel had not been "excluded from UNESCO," as might be inferred from the presentation of the resolutions in the mass media. Its exclusion was from "the list of countries entitled to participate in activities in which the representative character of states is an important factor."[21] The statement was also published in the *New York Times,* but it passed unheeded: even the distinction was significant for it still allowed for the exclusion of Israel from some UNESCO activities.

Jewish intellectuals had been mobilizing support against an Arab boycott ever since the Yom Kippur/Ramadan war. A number of voices within the Israeli political sector began a campaign to push the governments of Israel and the United States—as well as those of Canada, France, and the United Kingdom—to adopt appropriate countermeasures. In the words of Danny Halperin, founder in 1975 of the Israeli Economic Warfare Authority, the "philosophy" was "not to act, but to activate." Years later, he outlined the effectiveness of this strategy:

> I think it would be true to say that before 1973 people in Israel looked at the boycott [of Israel] as a nuisance. Something one could use to badmouth those applying it, but nobody was involved in a real struggle against the boycott . . . But after 1973, we all realized that the boycott is not only a problem but a danger as well.[22]

A central issue was the mobilization of the public in the United States and Europe. As Susan Rolef eloquently put it: "The logic behind this approach was that *the more noise one made around the issue, both in Israel and abroad [the better]* . . . With regard to North America and Europe this was part of a broader approach which sought to convince the public opinion that the Arabs were up to no good, and that the West could and should stand up to them."[23] Although the initiative involved the three major American Jewish organizations, it was led by "panic-stricken persons" from outside the Israeli government and "in cooperation with well-wishers from abroad to make greater effort than ever before to face up to the Arab-boycott on the legal, practical and moral levels."[24] In addition, since 1974, Jewish associations in the United States, especially the American Jewish Congress, had reacted definitively against the Diplomatic November Revolution. Several demonstrations were organized in protest against the UN's invitation to the PLO to address the General Assembly. Articles and reports about the

[18] Robert S. Jordan, "Boycott Diplomacy: The US, the UN, and UNESCO," *Public Administration Review* (July-August, 1984): 283–91, 283. In a speech at the Institute of World Affairs, University of Wisconsin, in 1975, Kissinger insisted that the "Third World sanctions against Israel" were the expression of the "heavy politicization" of UNESCO.

[19] "Kissinger Warns Majority in U.N. on U.S. Support," *New York Times,* July 15, 1975, 1, 4–5. M'Bow vehemently criticized the United States (Paul Hoffmann, "UNESCO Prodding U.S. on Payments," *New York Times,* Oct. 21, 1975, 9).

[20] "U.S. Threat to UNESCO Budget," *Times Educational Supplement,* Dec. 6, 1974, 16.

[21] Amadou M. M'Bow, "A Statement on Israel," *UNESCO Courier,* Jan. 1975.

[22] Danny Halperin, "Combatting the Arab Boycott—An Historical Survey," in *Freedom of Trade and the Arab Boycott,* ed. Susan H. Rolef (Jerusalem, 1985).

[23] Susan H. Rolef, *Israel's Anti-Boycott Policy* (Jerusalem, 1989), 36 (my italics).

[24] Ibid., 45.

Arab boycott and the "new Arab strategy" in the UN appeared every month on the pages of the *Congress Monthly.*[25] However, the conservatives were not the only ones who condemned the UN and UNESCO; liberal writers—"the New York intellectuals"[26]—also deplored the General Assembly's decision. Collaboration with UNESCO was presented by intellectuals and scientists in Israel as an endorsement of its policy toward Israel: "Israelis are disappointed at the lack of reaction from the scientific community abroad but grimly resigned to their increasing isolation," reported two observers.[27]

The UNESCO resolutions were also widely repudiated by intellectuals across the political spectrum on both sides of the ocean. The day after the three "Israel resolutions" were voted, the *New York Times* published a one-page advertisement with the heading "WE PROTEST," condemning UNESCO "in view of the increasing open and blatant anti-Israel bias shown by the recent decisions."[28] More than 100 intellectuals signed it, including scientists such as Hans Bethe, Owen Chamberlain, Robert Hofstadter, Isidor Rabi, Edward Teller, and Eugene Wigner.[29] It was followed by another statement with a similar text signed in Paris by European intellectuals of all political affiliations, from Raymond Aron to Jean-Paul Sartre. In early 1975, an ad hoc committee, convened by Nobel laureate André Wolf and including intellectuals such as Kenneth Arrow and Julian Huxley and writers Ernesto Sabato and Ignazio Silone, was set up to "look for the means and ways to bring UNESCO back to its vocation."[30]

Somewhat ironically, it was the ICTP itself that, at just this time, drew attention to its financial links with UNESCO. Salam had always used the scientific journals and magazines to call for further support for his institute. Just a few months before the 1974 General Conference, a long article about the ICTP appeared in the pages of *Nature.* "Financial support is shared in about equal proportions by the IAEA, UNESCO and the Italian government," the author wrote.[31] On November 8, just twelve days before the UNESCO scandal, another article in the same journal detailed the finances of the ICTP: "UNESCO support, although modest at first, is, at least formally, ten years old and UNESCO pursues a policy of regarding its financial aid as no more than seed money to get an institution ongoing." The article also pointed out the fragile situation in which the center found itself due to its financial instability and the hard line adopted by some delegations at UNESCO.[32] Therefore, when the Israel resolutions were approved, the scientists knew that the ICTP, an institute well known for its concern for

[25] The journal of the American-Jewish Congress. Joseph B. Shatta, "The New Arab Strategy," *Congress Monthly* 41 (Nov. 1974): 8. See also Richard Cohen, "The American Jewish Congress vs. the Arab Boycott," *Congress Monthly* 43 (Dec. 1975): 9–11; "Fighting the Arab Boycott," *Congress Monthly* 42 (Oct. 1975): 2; "UNESCO Assailed," *Congress Monthly* 41 (Dec. 1974): 5.

[26] David A. Hollinger, *Science, Jews, and Secular Culture: Studies in Mid-Twentieth-Century American Intellectual History* (Princeton, 1996), 8.

[27] John Hall and Peter Newmark, "Problems in Israel," *Nature,* Dec. 20, 1974, 626–7.

[28] "We Protest," *New York Times,* Nov. 21, 1974. The advertisement, with more signatures, reappeared in the following weeks.

[29] "UNESCO Adopts Resolution to Deny Israel Cultural Aid," *New York Times,* Nov. 21, 1974.

[30] "Rencontre pour l'Universalité de l'UNESCO," undated, mimeo, Abdus Salam Papers. Cataloged by the National Cataloguing Unit for the Archives of Contemporary Scientists; catalog no. 99/4/1. Library of the Abdus Salam International Centre for Theoretical Physics Archives, Miramare-Trieste, Italy (hereafter cited as ASP).

[31] "Centre for Practice of Theory," *Nature,* March 22, 1974, 270–1.

[32] "Support for Trieste," *Nature,* Nov. 8, 1974, 87.

the third world, depended on UNESCO. In Israel, this knowledge produced among the scientific community the decision to boycott the ICTP.[33]

THE BOYCOTT OF THE ICTP'S PROGRAMS

In June 1975, science writer John Maddox reported: "I heard that a conference due to be held at the ICTP during July has to be moved to Venice, simply because there are limits to the freedom of international scientific centres, such as that at Trieste, which are supported by UNESCO, to sponsor conferences at which Israelis may or may not attend."[34] Maddox was talking about the sixtieth birthday celebration Salam had arranged for Fred Hoyle. Soon after the announcement of the event, Israeli scientists made it clear that they would not visit the ICTP because of its links with UNESCO, which had "excluded" Israel. The Israeli scientists were led by Salam's former pupil Yuval Ne'eman, then president of Tel Aviv University. Earlier in 1975, Ne'eman had been elected "corresponding member" of the ICTP, presumably as a maneuver to demonstrate that the center wanted to stay away from the political feud at UNESCO. Ne'eman had replied that he would not be willing to visit or accept any honor from the ICTP.[35] After a few months, the center had been flooded with letters from Israeli physicists who followed the line taken by Ne'eman. Thus Hoyle's birthday conference had to be moved to Venice. This, however, was only one of the problems in a difficult year for the ICTP.

The ICTP had scheduled sessions in complex analysis, solid-state physics, nuclear physics, plasma physics, and high-energy physics for 1975. By mid-December 1974, however, a number of American and Israeli physicists and mathematicians had resigned as organizers of the ICTP courses and refused to attend any activity there. The boycott would badly affect virtually all the 1975 programs and activities.

Lipman Bers was invited to participate in the complex analysis course. Bers, a world authority in the field from Columbia University, took an openly hostile position. He sent a strong letter of resignation, with copies to a large number of his colleagues.[36] He convinced his good friend, the eminent mathematician Lars Valerian Ahlfors, to follow in his footsteps. In his own resignation letter to Salam, Ahlfors explained: "the fact that some of my closest friends are staying away makes my participation quite unattractive."[37] Wolfgang Fuchs, professor at Cornell and the organizer of the same course, did likewise: "the only way of protesting that [went] beyond empty words [was] resigning."[38] More letters followed, and the trickle of resignations became a flood from American mathematicians.

The Solid State Winter Course followed a similar pattern. In late April 1975, Walter Kohn and Norton Lang, from the University of California at San Diego, both central figures to the course, added their names to the list of boycotters. An attempt was made to reorganize the course by replacing the Americans with lecturers from Spain and Latin America and requesting that remaining speakers assume additional sessions.

[33] Luciano Bertocchi to Salam, internal memo, July 26, 1975, G.118, ASP.
[34] John Maddox, "Affront to Freedom in Science," *Times Educational Supplement,* June 1975.
[35] Yuval Ne'eman to Salam, May 13, 1975, G.119, ASP.
[36] Lipman Bers to Salam, Jan. 20, 1975, G.118, ASP.
[37] Lars Ahlfors to Salam, Jan. 27, 1975, G.118, ASP.
[38] Wolfgang Fuchs to Salam, Dec. 12, 1974, G.116, ASP.

The situation became critical in December 1975, when, a matter of weeks before the course was due to start, Leo Falicov, an Argentinean solid-state physicist who worked in the United States, resigned. Falicov was the leading speaker, in charge of fifteen lectures. John Ziman, the organizer of the course, had to ask two Spanish and Latin American speakers to fill the breach.

The case of the nuclear physics course, which was scheduled for summer 1975, mirrored those of the mathematics and solid-state courses.

Very few scientists apart from the Americans and the Israelis joined the boycott. However, the absence of researchers from leading institutions in North America and from the Weizmann Institute badly disrupted the courses. The ICTP was precisely a space where third world scientists could meet colleagues from leading centers in the West. Young European scientists were attracted to the ICTP meetings mainly because of the presence of leading physicists, most of them working in American universities. The resignation of those physicists was a terrible blow to young scientists' expectations.

The boycott against the ICTP took place while a big revolution in high-energy physics was under way. High-energy physics was the main field of research and activities at the ICTP because of Salam's group. The 1974–1976 events have been analyzed by various authors, including insiders, largely concerned with the intellectual development of particle physics and the relations between theory, experiments and machines.[39] On November 11, 1974, two American laboratories investigating the e^+e^- (positron-electron) annihilation detected an enormous resonance around 3.1 GeV. Burton Richter's group at the Stanford Linear Accelerator Center (SLAC) called the new particle psi (ψ), and the Brookhaven National Laboratory–MIT collaboration, led by Samuel Ting, called it J. A few days later, the Italian laboratory at Frascati confirmed the discovery of the J/ψ particle. The outcome was the establishment of charmed quark and quantum chromodynamics, the late-twentieth-century model of particle interactions. It was the community of particle physicists who coined the term the "November Revolution" in high-energy physics to refer to this period.

A few weeks after the J/ψ discovery, Salam and Jogesh Pati, his Indian collaborator, offered a particle spectroscopy alternative to the one predicted by the charm model. They claimed that it was necessary to begin a search in the energy regions in which their model predicted the existence of new particles. Salam hoped the color gluons would be detected as well as charm. Salam proposed holding a meeting in Trieste during the summer of 1975. Its title would be *Phenomenology in High Energy Physics and the Missing Particles,* referring to the possible companions of the J/ψs. Leading theoreticians and experimentalists were invited, including Richter, but the Americans and the Israelis refused to participate. Some influential theorists in Israel, such as Ne'eman and David Horn, had already rejected any collaboration with the ICTP, as did Haim Harari. Refusing any collaboration with the center, he told Salam that "the only possible reaction of the civilized world must be to reject any participation of UNESCO in any . . . event." He also advised Salam that he intended to circulate the letter in which he had discouraged the participation of scientists in ICTP activities.[40]

[39] On the November Revolution, see Andrew Pickering, *Constructing Quarks: A Sociological History of Particle Physics* (Chicago, 1984), 180–8, 213–28, and 253–81; Lillian Hoddeson, Laurie Brown, Michael Riordan, and Max Dresden, eds., *The Rise of the Standard Model: Particle Physics in the 1960s and 1970s* (Cambridge, 1997).

[40] Haim Harari to Salam, Feb. 4, 1975, B.246, ASP.

Salam tried to persuade him and the others to stop the boycott, pointing out that it would damage the center, not UNESCO.

The new particles were discussed in August at a major SLAC conference. Both Salam and Pati felt excluded from the debates being held in the United States, not because their model was rejected, but because it was being utterly ignored and the chance to explain it in Trieste denied. Harari gave a talk in which he referred to "[t]he many versions of the Han-Nambu color," stressing that "[a]ll such models suffer from common difficulties." Thus the only tacit reference to the Pati-Salam model was in a reference to ten models that had to be discarded. After a short comment, Harari concluded: "The rejection of the possibility that the J/ψ particles are colored *returns us to the conventional theoretical framework* of hadron physics."[41] Indeed, Salam knew that alternative theories needed advocates and that direct access to experimentalists was crucial. He learned about SLAC's official stance through an internal memo signed at the laboratory by fifteen physicists stating that "no experimental results obtained at SLAC could be exhibited at a UNESCO institute like Trieste."[42] This was the coup de grace to the Trieste meeting, and the only ICTP activity that was actually canceled as a result of the boycott.

In short, the boycott seriously disrupted all the activities held at the center in 1975.

THE PROPONENTS OF THE BOYCOTT

Although there was no explicit coordination of the boycott of the ICTP, there was a clear national pattern: it was spearheaded by Israeli physicists who asked their American colleagues to join them.[43] Furthermore, in each subdiscipline there was at least one promoter of the boycott. Kohn (solid-state physics) circulated letters urging his colleagues, including Falicov, not to visit the ICTP. Bers (complex analysis), Harari (high-energy physics), and T. E. O. Ericson (nuclear physics)—the latter from CERN and one of the few physicists in Europe who boycotted the center—sent similar letters urging their colleagues to follow their examples.[44] There were no contacts between boycotting scientists from different subdisciplines; in this sense, the phenomenon was local.

The motivations of those promoting the boycott were very different. Lipman Bers was born in Latvia, where he was politically active. In 1940, because of his Jewish background, he immigrated to the United States, where he was supported by a Yiddish research organization. His contributions in complex analysis made him one of the leading mathematicians of his day. A Fellow of the American Association for the Advancement of Science since 1965, he was appointed Davies Professor of Mathematics at Columbia University in 1972. Bers led the creation of the Human Rights Committee of the National Academy of Sciences. He was a left-wing liberal and widely respected

[41] Haim Harari, "Theoretical Implications of the New Particles" (paper presented at the International Symposium on Lepton and Photon Interactions at the High Energies, Stanford Univ., Stanford, Aug. 1975).

[42] Salam to J. Harrison, July 28, 1975, G.118, ASP.

[43] The idea of a conspiracy did arise in the minds of those in charge of the ICTP's activities. The most explicit reference to someone pulling strings in order to damage the center came from Stig Lundqvist. He thought that Walter Kohn was behind the boycott (Lundqvist to Budinich, May 27, 1975, G.121, ASP).

[44] T. E. O. Ericson to Salam, Dec. 18, 1974; and Bers to Salam, Jan. 20, 1975, G.118, ASP. Harari does not recall what his personal involvement in the affair was, but he remembers sending copies of his "very strong letter to Salam" to other speakers (Haim Harari, email to author, June 11, 1999).

among his American colleagues as a mathematician and as someone committed to humanitarian causes.[45] His friendship with Ahlfors dated from 1951.

Wolfgang Fuchs was another émigré from the Nazi government. After studying in Cambridge, he went to the United States, where he pursued a brilliant career at Cornell University. He was well known for his political activism. In Ithaca, he was a member of the local chapter of Amnesty International. More significantly, during the cold war he promoted contacts between American, Russian, and Chinese mathematicians.[46] Neither Bers nor Fuchs was a Zionist. Fuchs, in fact, had signed letters against the violation of human rights by Israel. Therefore, their goal was not necessarily to support Israel's policy through the boycott but certainly to oppose the decision made at UNESCO. Excluding a country from the United Nations violated the most elementary principles defended by human rights activists.

Walter Kohn's case was different. Born in Austria to an orthodox Jewish family, he studied in a Jewish school in Austria in the 1930s. When the Nazis occupied the country, he immigrated to England; his parents died in Auschwitz. After the war, he studied first in Canada and later in the United States, at Harvard. His identity was always a matter of permanent reflection for Kohn: "In terms of my identity, I see myself as an American, a world citizen, a Jew and a former Austrian." Yet his strongest ties were with the Jewish culture and community. In San Diego, he worked on several Jewish projects. In Israel, where he "had some of [his] closest friends," Kohn had a reference point.[47]

Despite the differences, we should notice a common factor. Bers, Fuchs, and Kohn were émigrés. They had learned firsthand about the politicization of the German academic world. Furthermore, they not only strove against the depoliticization of academia but also, as scientific émigrés, struggled for the secularization of academic life to confront the anti-Semitism that prevailed in American universities in the 1930s and 1940s. The importance of keeping scientific institutions "politically neutral" had been crucial for their survival. Those who presented the Israel Resolutions as the "politicization of UNESCO" thus brought back bitter memories to the minds of several Jewish scholars. The way the resolutions were presented to these scientists was very effective in gaining their unquestioning support.

In high-energy physics, Haim Harari overtly promoted the boycott. Privately, Ne'eman also campaigned against the ICTP, but he preferred keeping a low profile; Harari took the mission of mobilizing high-energy physics in the United States. He had finished his Ph.D. in Israel in 1965 and visited the ICTP that same year. He became an associate member in 1967, although he only visited the center to attend a few conferences, not to do research.[48] In 1974–1975, he was a visiting theoretician at SLAC, and it was from there that he energetically campaigned against UNESCO and the ICTP. Wolfgang Panofsky, one of the most prominent Jewish physicists on the West

[45] William Abikoff, "Lipman Bers," and Carol Corillon and Irwin Kra, "On the Social Activism of Lipman Bers," in *Notices of the American Mathematical Society* 42 (Jan. 1995): 8–18 and 18–21.

[46] J. Milne Anderson, David Drasin, and Linda R. Sons, "Wolfgang Heinrich Johannes Fuchs (1915–1997)," *Notices of the AMS* 45 (Dec. 1998): 1472–8.

[47] From *Les Prix Nobel,* ed. Tore Frängsmyr (Stockholm, 1999), available at http://www.nobel.se/chemistry/laureates/1998/kohn-autobio.html [in 2004]. Karin Hanta, "From Exile to Excellence," *Austria Culture* 9 (Jan./Feb. 1999).

[48] ICTP, *ICTP Annual Reports,* 1967, 1968, ICTP Archives, Trieste.

Coast, was director of the laboratory. Its deputy-director, Sidney D. Drell, joined other scientists who signed a "Statement on UNESCO," which stated that they would "not participate in, cooperate with, support, or contribute to any UNESCO programs or Activities" unless the decision to exclude Israel was reversed.[49] As we saw, several physicists from that laboratory refused to present their results at the Trieste center. SLAC did not oppose that decision, which can be interpreted as tacit support by its directorship.

American scientific academies were also embroiled in the issue. In early 1975, a joint committee of the American Academy of Arts and Sciences and the National Academy of Sciences was appointed to recommend what action should be taken regarding the political "misuse of UNESCO." Harvey Brooks, president of the American academy, reported to Salam about the angry feelings among his American colleagues "due to the politicization of UNESCO."[50] He asserted that although he would try to help the center, "this new turn place[d] grave obstacles." The ICTP should be prepared for a massive boycott.[51] Most of the boycotting scientists of the center belonged to at least one of these academies. The "exclusion" of Israel meant, in their view, an occupation of the free cultural field by the third world and the Communists. Jewish American scientists found a chance to contribute to the defense of Israel on their own battlefield. Scientists aligned themselves with other members of the Jewish Diaspora: they were also part of the machinery that was "activated" against the "Arab boycott."

SALAM'S SUPPORTERS IN EUROPE

Most members of national communities outside the United States and Israel refused to join the boycott. The Europeans were critical about the resolutions but moderate with regard to the idea of taking action against UNESCO programs. For several years, the solid-state physics and the mathematics courses had been coordinated by Europeans. John Ziman, a British fellow of the Royal Society, and the Swede Stig Lunqvist had been collaborating with the ICTP since the end of the 1960s. Both had experience in programs sponsored by UNESCO; for instance, UNESCO had sent Ziman to Cuba as a scientific expert. They considered the Israel resolutions to be a big mistake by the third world representatives and to be grave obstacles for the development of the ICTP. Throughout the two years of the boycott, Ziman and Lunqvist strove to explain to their colleagues that the UNESCO resolution had no "practical effects" whatsoever for the organizations under its tutelage and that there were no "strong administrative links between" ICTP and UNESCO.[52] Furthermore, both scientists were convinced that

[49] *A Statement on UNESCO,* papers of Professor Sidney Drell, SLAC Archives, Stanford Univ., Stanford.

[50] Harvey Brooks, letter read at the Annual Meeting of the American Academy on May 14, 1975, G.116, ASP.

[51] Harvey Brooks to Salam, Dec. 2, 1974, G.116, ASP. See also Harvey Brooks, American Academy annual meeting letter (cit. n. 50). The joint committee considered the possibility of having a meeting between scholars and scientists from both industrialized and developing countries, "under the impartial aegis of the Swedish Academy, but the idea of a conference was finally dropped in favor of a more thorough long range approach through the carefully planned commission, discussion, and publication of scholarly papers." S. R. Davis, "Report of the Special Committee on UNESCO," in *Records of the Academy, 1975–1976* (Cambridge, 1976).

[52] Ziman to Henry Ehrenreich, Jan. 15, 1976, G.118, ASP.

Walter Kohn was behind the boycott of their course. Hence Ziman's reaction to the resignation of Norton Lang, who had been Kohn's pupil, was severe:

> If you are seriously concerned about the general policies of all the various organisations, corporations, institutions, governments etc. that happen to give support to your scientific work, you should investigate these thoroughly and decide where your moral allegiances really lie.[53]

Falicov's reasons for boycotting the ICTP added another ingredient to the anti-Israel affair, namely the exclusion of a nation such as Taiwan from the center's activities. Falicov, however, considered this a violation of the "principle of universality" that should prevail in science.[54] Ziman perceived the danger of this argument and warned Salam: "I wrote back immediately reassuring him as far as I possibly could and putting him right over Israel but the linking with Taiwan is a very serious danger, since we have, indeed, excluded people from there."[55] In line with the replacement of Taiwan by China in all UN agencies in 1971, the ICTP had to follow UN rules. Paolo Budinich, deputy-director of the ICTP, too, replied to Falicov, explaining the legal reasons why the center could not invite non-UN members.[56] Ziman knew that this argument could open a new front in an already difficult battle, igniting inconvenient debates about the real nature of scientific internationalism. The ICTP was unwilling to open a discussion regarding which countries could and could not participate in the center's activities.

Other scientists in Europe preferred to maintain UNESCO programs, like those sponsored at the ICTP, independent of the political feud ignited by the General Conference. While Harari and the SLAC group boycotted the ICTP, Leon Van Hove, former director of the CERN Theory Division, disapproved of the episode at UNESCO "as a personal position," but he "did not feel that [his] contacts and doings with the Centre should be affected."[57] Similar reactions came from mathematicians in England. J. Eells, coordinator of the mathematics courses at the ICTP and a professor in London, informed Salam that the general position within the American Mathematics Society was to boycott any UNESCO-affiliated organization, which he deplored.[58] M. J. Field, a colleague of Eells's, disagreed with the outcome of the 1974 General Conference but was very upset with Fuchs's resignation.[59] The sharp contrast between Americans and Europeans was mirrored in music: the public discussion between virtuoso Yehudi Menuhin, on the one hand, and his colleagues in America—Isaac Stern, Arthur Rubinstein, and Leonard Bernstein—on the other, is a case in point. Menuhin, then president of the Music Council of UNESCO, refused to resign, as his American colleagues urged him to do.[60]

An initiative taken by Victor Weisskopf (in the United States), Aage Bohr (in Copen-

[53] Ziman to Norton Lang, May 20, 1975, G.118, ASP.
[54] This "principle of universality," as a token of an idealized scientific internationalism, was invoked by a number of scientists, including those against the boycott.
[55] Ziman to Salam, Dec. 2, 1975, G.120, ASP.
[56] Budinich to Leo M. Falicov, Feb. 4, 1976, G.122, ASP.
[57] Leon Van Hove to Salam, Feb. 3, 1975, G.120, ASP.
[58] Eells to Salam, Jan. 18, 1974, G.120, ASP.
[59] Field to Salam, Jan. 2, 1975, G.120, ASP.
[60] The exchange of open letters in the pages of the *New York Times* spanned three months in early 1975; see, e.g., the following dates: Jan. 19, 18; Feb. 11, 2; Feb. 14, 5; Feb. 23, 12.

hagen), Alfred Kastler (in France), and John Ziman demonstrates their concern about the future of scientific internationalism as a consequence of the boycott. Weisskopf, an Austrian émigré who had built close ties with postwar European physicists as director of CERN in the early 1960s, decided to write a letter to *Physics Today* on the grave consequences of such a "division of the scientific community."[61] After long discussions about its terms, he, Kastler, Bohr, and Ziman published the letter in June 1976. It was the only public statement in favor of the ICTP addressed to the scientific community. The message, however, went beyond support to the Centre; the authors were concerned with the division not only between first and third world scientists, but also between the scientific communities in Europe and the United States.

For intellectuals in Europe, UNESCO had been important in offering a new space for international cooperation within Europe. In particular, UNESCO had been involved in the negotiations to create CERN and therefore in the reconstruction of European science. For scientists such as Van Hove and Kastler the fact that UNESCO was "politicized" was not new. The point was whether politics *really* obstructed international scientific exchange. American scientists were more skeptical about multinational endeavors in general, and UNESCO in particular. A study of sales of UNESCO publications for 1968 indicated that the most sizable readership was in Europe, while attentiveness was greater in Latin America than in North America.[62] Europeans felt that the American and Israeli scientists were politicizing the issue, while the Americans and Israelis argued that it was Arabs who had politicized UNESCO. All were violently against the "November Diplomatic Revolution," but their different experiences and interests with regard to UNESCO led to sharply different attitudes toward the ICTP.

THE ANATOMY OF THE BOYCOTT

The common argument calling for boycott of the ICTP was UNESCO's sponsorship. To enter into the anatomy of the boycott, we need to investigate what other scientific initiatives, in areas similar to those pursued by the center, were sponsored by UNESCO.

Since the early 1950s, UNESCO had sponsored international activities related to the exchange of scientific information and to the establishment of regional centers for the promotion of scientific research. Since 1946, the International Council of Scientific Union (ICSU) had been UNESCO's consultant on international cooperation in science. Although the ICTP's financial dependence on UNESCO had decreased since then, for the 1975–76 fiscal year UNESCO contributed US$560,000 to ICSU for advisory services and specific activities, which was twice UNESCO's contribution to the ICTP.[63]

The International Union of Pure and Applied Physics (IUPAP) was the foremost international association of physicists. ICSU channeled funds for physics events through IUPAP. UNESCO's official documents explicitly stated this collaboration, extending its commitment to support ICSU's partners: "Further financial support will be provided, as appropriate, to the unions, associations and other organs of ICSU for the execution

[61] Kastler, in France, went even further, suggesting a letter urging Victor Weisskopf not only not to boycott organizations affiliated with UNESCO but also "not to boycott UNESCO itself" (Kastler to Weisskopf, Dec. 1975, G.120, ASP).
[62] Elzinga, "Unesco and the Politics of Scientific Internationalism," (cit. n. 3), 114.
[63] UNESCO, *Approved Programme and Budget 1975–1976* (Paris, 1975), 186, par. 2113.

of specific activities."[64] IUPAP's reports also established the links between the union and UNESCO, and although it concentrated on educational programs, the agreement gave no limit to subject areas.[65]

A significant, though not surprising, feature of IUPAP was its Western constituency and image. In 1972, ten out of the thirty-nine national committees of IUPAP were in third world countries, and of the total number of votes, allocated according to the number of shares belonging to each country, the third world had only 15 out of 102. By July 1975, Salam had decided that it was worth trying to expose the potential danger faced by ICSU and IUPAP if the boycott widened. He wrote to his friend Richard Dalitz, "If the boycott of all UNESCO-sponsored institutions continues, ICSU is going to have a very difficult time soon."[66] Assuming political and moral consistency on behalf of the boycotting scientists, the equation was simple: if ICSU was worth protecting, the scientific community should lift the boycott against the ICTP. The assumption proved to be wrong.

The only IUPAP *Book of Nomination Forms* Salam kept in his personal library in Trieste was the 1975 issue, the contents of which are revealing.[67] At least three nominations from Israel's IUPAP National Committee were presented for consideration by the Fifteenth General Assembly, due to be held in Munich in 1975: A. Muny, for a post at the Commission on Superconductors; W. Low, for a post at the Commission on Magnetism; and Haim Harari, who was nominated for membership at the Commission on Particles and Fields. The form was presumably submitted in May 1975, after Harari started his campaign against the ICTP. Another member of IUPAP throughout these years was Yuval Ne'eman.[68] It is remarkable that Salam did not expose this apparent contradiction by some the boycotting scientists. He recognized that, to retain a foot in both fields, third world development and first world science, he had to ensure that certain boundaries were not transgressed.

This was not the only incongruity between the adduced reasons for boycotting the ICTP and the attitude toward other UNESCO-sponsored scientific initiatives. The August 1975 SLAC (high-energy physics) conference was partly sponsored by IUPAP. Salam built his hopes on the SLAC-IUPAP-UNESCO connection and wrote to the assistant director-general for science, Canadian J. M. Harrison: "If SLAC knows of IUPAP's relation with UNESCO, they must have withdrawn hostility to UNESCO. This is good news for our programmes next year."[69]

A few months later, Salam learned that the boycott was provoked not just by the connection with UNESCO but also by something deeper. Immediately after the SLAC conference, Salam received a letter from an attendee, Tai Tsun Wu, a Harvard researcher. He had visited the center only a couple of times, and his contacts with Salam were sporadic,[70] but "strange conversations" among some participants on "what to do about the Trieste Conference" elicited the letter. The official position was to boycott the conference because it was sponsored by UNESCO, Wu told Salam. But he added:

[64] Ibid.
[65] IUPAP, "Report on the 14th General Assembly" (Washington, D.C., 1973), 5.
[66] Salam to Dalitz, July 1, 1975, G.119, ASP.
[67] In Salam Personal Library, held in the Abdus Salam ICTP Library (AS 341.16 IUPAP).
[68] In 1971, Ne'eman organized an international conference in Tel Aviv partially supported by the union through a grant of US$1000. IUPAP, "Report on the 14th General Assembly" (cit. n. 65).
[69] Salam to Harrison, July 28, 1975, G.120, ASP.
[70] Tai Tsum Wu, email to author, June 20, 1999.

> Somebody then mentioned that the SLAC conference was also partially supported by UNESCO, and that Harari was well aware of this. I could not judge the accuracy of this statement, but it was in any case not challenged. After some further discussions, *a pro-Israel physicist finally admitted that the real reason for the boycott was not against UNESCO, but because of your close tie to the developing countries, who were responsible for kicking Israel out of UNESCO.*[71]

Salam replied to Wu: "It had always puzzled me why Harari had taken such an initiative against us . . . Your letter seems to make the issues a little clearer."[72]

This letter deserves careful examination. The "politicization" of an international cultural institution such as UNESCO had been linked in the United States to the "tyranny of the majority." Accordingly, the third world "and its allies" put in jeopardy the normal course of international cooperation. Wu's letter allows us to learn how the boycotting scientists translated such a link and defined "normality" in the scientific field. I should like to extend Jessica Wang's thesis to argue that their aim was to call for an "anti–third world" science as a discursive strategy to define a "politically correct" science.[73] For the promoters of the boycott, a "politically correct" science was, thus, keeping scientific institutions neutral regarding any political conflict, meaning science should not be used to upset existing power relations in international politics. The exclusion from international scientific exchange of those who threatened the status quo was a corollary of that norm.

What was Salam's link to third world regimes interested in "politicizing" UNESCO and other international organizations? Salam was indeed the leader of the third world cause in the Western physics community, and the ICTP embodied such a crusade to modernize the developing countries through science. However, it is worth considering another facet of Salam's life and his links to the third world. Salam's ties to Pakistan were at the highest level; for more than fourteen years, he had been scientific adviser to three different presidents. In early 1972, Pakistan left the commonwealth, and by November it had left the Southeast Asia Treaty Organization (SEATO) security pact. It was hoped that cutting economic and military ties with Britain and the United States would pave the way to a leading position among Arab nations. After being appointed as prime minister in 1973, Zulfiqar Ali Bhutto made a radical turn toward the Middle East and North Africa, hoping to impede an eventual recognition of Bangladesh and to finance a Pakistani nuclear bomb.[74] In February 1974, the Islamic Summit gathered at Lahore. Radical leaders of the Arab world convened: Arafat, King Faisal of Saudi Arabia, Colonel Muammar al-Qaddafi, and Presidents Hafez al-Assad, Anwar el-Sadat, and Houari Boumedienne.[75]

Salam in fact disliked Bhutto's anti-Western views, rhetoric, and actions, but his position was unclear to those outside his immediate circle—after all, he continued being chief scientific adviser to the president of Pakistan. Ironically, Salam was linked by

[71] Wu to Salam, Sept. 22, 1975, G.119, ASP (my italics).
[72] Salam to Wu, Oct. 20, 1975, G.119, ASP.
[73] Jessica Wang, *American Science in an Age of Anxiety: Scientists, Anticommunism, and the Cold War* (Cambridge, Mass., 1999).
[74] Ashok Kapur, *Pakistan's Nuclear Development* (London, 1987), 74, 150; Ian Talbot, *Pakistan: A Modern History* (London, 1998), 238.
[75] In addition, the young Libyan leader, in a packed stadium, spoke before the crowd regarding Pakistan as the "citadel of Islam in Asia" and stating that "our resources are your resources." Talbot, *Pakistan* (cit. n. 74), 237.

his fellows in the West with a movement in his native country with which he disagreed. In mid-1974, Salam resigned his position as presidential adviser, and a few months later he resigned his membership on the National Science Council—a body of which he had been part since 1963. His discrepancies with Bhutto's foreign policy were not the cause, but rather his concern about the domestic policy of the new president. Salam belonged to an Islamic heterodox sect called the Ahmadiyya Jamaat. In 1974, an eight-party coalition of the ulama launched a campaign against the Ahmadiyyas, and as a consequence the sect was legally expelled from Islam.[76] Two of his lives clashed, leaving Salam an easy target for attacks from both extremes, the populist Muslims in Pakistan and the "pro-Israel" physicists in the scientific community. The ICTP was scapegoated for Salam's conflicting and ambiguous links with both a third world country striving to strengthen its ties with the Islamic world and a third world center seeking Western support. The situation was ambiguous as well because, ignoring the callings of various colleagues from both sides of the dispute, Salam never clarified publicly his position about the Israel resolutions.

Yet Salam's association with Islam was not enough to warrant the boycott; during its first fifteen years, the ICTP did not achieve the status of a mainstream research school. It was perceived as a center for fostering third world development rather than a mainstream research institution. As a result, boycotting the ICTP had very different professional consequences from boycotting an elite institution such as Stanford. While the former would not harm the professional situation of a boycotter, the latter would have resulted in scientific suicide. Harari described his first contact with the center in a letter as follows: "It was an unbelievable opportunity for me, as a young scientist, to meet just about every prominent theoretical particle physicist in the world (including USSR) in one place before I even become a postdoc."[77] By the mid-1970s, Harari had become a player in the big leagues, a regular visitor to SLAC and a professor at the Weizmann Institute. For most Israelis, the prospect of strengthening their links with a prestigious laboratory in the United States was certainly more attractive than an association with a center identified with third world development. We can, then, begin to understand why the ICTP was an obvious scapegoat; its low scientific reputation, its identification with third world aspirations, and its unstable financial situation made it a soft target for an attack against UNESCO.

NEGOTIATING WITH UNESCO

To understand Salam and Budinich's strategy in handling the boycott, it is necessary to recall the financial situation of the ICTP by the mid-1970s. Between 1972 and 1977, the combined contributions from "unstable sources," especially the Ford Foundation, the United Nations Development Program (UNDP), and the Swedish Interna-

[76] As Talbot explains, Bhutto "found that while closer ties with the Islamic world were all well and good for strengthening Pakistan's diplomatic position, money from the oil-rich Middle East also flowed freely into the coffers of his would-be opponents" (Talbot, *Pakistan* [cit. n. 74], 238). The 1973 constitution declared that Islam was the state religion. Hence, the 1974 expulsion had not only religious consequences that led to further persecution but also political and legal ones. Indeed, since 1974, the harassment and human rights violations against the Ahmadiyya community escalated with the tacit complicity of the state, as organizations such as Amnesty International and others have made public. A. R. Gualtieri, *Conscience and Coercion: Ahmadi Muslims and Orthodox in Pakistan* (Montreal, 1989).

[77] Haim Harari, email to the author, June 11, 1999.

tional Development Cooperation Agency was greater than UNESCO's or the IAEA's. To make matters worse, those contributions would end in 1977–78, placing the continuation of such programs in jeopardy. Salam spelled out the situation in an eloquent letter to Sigvard Eklund, IAEA's director, concluding that "under the actual conditions [the ICTP was] not viable."[78] This was a dramatic touch to a longtime "plea for our parent organizations to take charge of the funding."[79]

Hans Bethe then suggested a solution: "In the meantime, and until the UNESCO Board rescinds its decision, could you not ask the government of Iran to support you for the intervening years directly? In that case you could renounce UNESCO support for the time until the political decision is reversed."[80] In fact, Salam had already taken the initiative to approach Iran, motivated by its government's pro-Western leanings and public discourse about the importance of promoting science and technology for development. In the winter of 1974 he traveled to Teheran seeking funds for the center. On returning home, he was optimistic, but the offer did not materialize.

During 1975–1976, Salam and Budinich negotiated with UNESCO and the IAEA on two points: how to bring financial stability to the center, and how to survive the boycott. On the financial side, they pointed to the ICTP's chronic deficit and its new programs, the most vulnerable of which were those of most value to UNESCO. They lobbied UNESCO through their Italian contact, Dr. A. Forti, to get support for courses on "appliable" subjects, such as oceanography and applied mathematics. This trend of aligning the ICTP scientific program with UNESCO science policies had started before this date. However, given M'Bow's instrumentalist view of science, it was crucial to emphasize the ICTP's commitment with something other than theoretical physics. On April 21, 1975, the director-generals of the IAEA and UNESCO arranged a lunch meeting in Paris, to which Salam was invited, to discuss the future of the ICTP. Salam requested that the physicists Leon Van Hove (CERN) and Alfred Kastler (Strasbourg), both strong supporters of the ICTP, be invited. These men had been members of the 1974 ad hoc committee, whose recommendations served as a reference point to prepare the agenda of the meeting.[81] The agenda did not explicitly refer to the boycott, but it was the political background to the meeting. In that meeting, the extension of the agreement was arranged, admitting the necessity of increasing the "stable" contributions, and on July 3, 1975, the formal extension, valid until 1978, was signed by UNESCO and the IAEA.

Did Salam invoke the boycott during the negotiations? He certainly played with an elementary feature of a patronage relationship: that at its most elemental level it entails an exchange of loyalty for material support. In January 1975, Salam wrote to M'Bow thanking him for his note to Eklund recommending an extension of the IAEA-UNESCO agreement. He also briefed the director-general about the risk of a massive boycott from the United States and Israel. Salam sent copies of his letter to M'Bow and Harrison, emphasizing that, in view of the boycott and of the critical financial situation, he "would deeply appreciate guidance."[82] The word "guidance" appears in both his letter to M'Bow and the annexed note to Harrison, but nowhere else

[78] See Salam to Eklund, Jan. 19, 1976, D.169, ASP; Salam to Eklund, July 11, 1975; and Salam to Eklund, Sept. 12, 1975, D.170, ASP.
[79] Salam to Eklund, July 11, 1975, D.170, ASP.
[80] Bethe to Salam, Dec. 27, 1974, G.119, ASP.
[81] Budinich to C. R. O'Neil, March 16, 1975, D.169, ASP.
[82] Salam to M'Bow and Harrison, Jan. 13, 1975, G.118, ASP.

in his correspondence concerning the ICTP's management did Salam make such a request. He was a master at seeking help for the center, but "guidance" also meant advice, and such a plea for instructions was unusual. Salam continued to consult UNESCO about the best steps to take and to brief it about the boycott. He wanted to transmit a clear message: although he disliked the Israel resolutions for the damage they could cause to the UNESCO programs, he would remain loyal to the organization. Harrison insisted: "you [Salam] are in a unique situation to make a statement . . . to show the western scientists that their action in denying support to the UNESCO secretariat will do precisely what western science does not want to happen: impede the implantation of science and technology in the developing world."[83] Salam never made a public statement for or against the resolutions and its consequences. The key, he believed, was keeping a prudent distance from the political debate and, in private, displaying the art of opportunism in the political context. The ICTP should not state an official position because that might seriously jeopardize its relations with UNESCO or with the Western scientific community, both of which were crucial.

This survey of their actions helps one appreciate Salam and Budinich's strategy. Salam's punctual reports of the effects of the 1974 General Conference upon the center's activities; the desperate appeal for "guidance" just when the boycott was starting; and the combined efforts with the Italians to make sure that UNESCO became aware of their efforts to widen the ICTP's programs—in these ways Salam and Budinich delivered a message of solidarity and loyalty during a crisis *generated by* and *within* UNESCO. However, if the center had to suffer the consequences of the confrontation between blocs in the General Conference, then UNESCO had to show its commitment in supporting the ICTP's demands for more funds. The center, with its halo of neutrality, would try to clarify the situation among the scientific community. In this sense, the ICTP could be instrumental to the purposes of UNESCO. If the center disappeared, UNESCO would lose an important ally within the scientific community.

In 1976, the ICTP achieved an unprecedented increase in the IAEA's and UNESCO's appropriations. Shortly before the beginning of both General Conferences in Vienna and Paris, Salam mobilized all his allies, in the third world and in the industrialized countries, to "exercise their influence" upon their national delegations in support of the director-generals' recommendations. For fiscal year 1977–78, they recommended raising IAEA's contribution from US$230,000 to US$450,000, and UNESCO's from US$225,000 to US$300,000.[84] The recommendations were passed by both conferences. After the UNESCO conference, M'Bow allocated an extra US$100,000 grant, a gesture that one could interpret as compensation for a difficult year. Overall, it was the largest increase by both agencies during the 1964–1979 period. (See Table 1.) In current dollars, compared with the year before, the IAEA and UNESCO allocations had increased by 85 percent and 38 percent, respectively.[85] In constant dollars, the effective combined contribution had increased by 20 percent. Finally, the negotiation

[83] Harrison to Salam, Jan. 24, 1975, G.118, ASP.

[84] Salam's letter to a network of scientific-bureaucratic allies was dated March 11, 1976. Among them: V. Latorre (Peru); S. Mascarenhas (Brazil); J. J. Giambiagi (Argentina); A. Kastler (France); V. Weisskopf (United States); B. D. Nag Chaudhury (India), M. Menon (India); A. Baiquni (Indonesia); H. B. G. Casimir (Netherlands); F. García-Moliner (Spain); Edmundo de Alba (Mexico); F. Claro (Chile); D. A. Akyeampong (Ghana) (D.171, ASP). For a discussion on the ICTP's associates network, see De Greiff, "Intenational Centre for Theoretical Physics" (cit. n. 1), chap. 5.

[85] The 1970 figure might be misleading without recalling that in that year UNESCO joined the IAEA in the operation of the ICTP.

Table 1. Increment of the Contributions to the ICTP

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
Italy	–1.77	–2.54	–1.73	–8.2	–2.3	–2.3	–2.1	–1.7	–1.2	2.98	1.82	–1.5	–0.3	5.42	11.1	2.67	26.2	10.353
IAEA	–0.35	14.49	8.742	–1.58	–0.5	–1.4	–1.3	–1.7	0.22	2.73	15.4	–7	**16.3**	–5.9	–0.1	7.32	–1.7	6.235
UNESCO	–0.14	–0.2	–0.14	–0.23	–0.2	23.9	–1.3	–1	–0.3	2.26	1.46	–1	**4.86**	–1.4	–1	–1.5	1.52	–0.84
Other	–2.26	11.75	6.88	–10	–3	20.2	–4.6	–4.4	–1.3	7.97	18.7	–9.5	20.8	–1.9	9.92	8.51	26	15.748

* Comparison between two successive years presented taking into account inflation, using constant dollars.

with both agencies was crucial to increasing the Italian component; as mentioned before, raising UNESCO and IAEA appropriations would ease negotiations with the Italian government. As can be seen from Table 1, in 1978 and 1979 the Italian contribution also increased significantly.

I should stress that in 1976 UNESCO itself was boycotted financially by the United States, France, and Switzerland. Thus it is remarkable that, under such financial pressure, added to the world financial crisis and inflation, UNESCO's secretariat decided to allocate more funds to the ICTP.[86] Salam described the improved relationship in a letter to his ally on the other side of the Atlantic, Victor Weisskopf. He described the only consolation in the critical situation created by UNDP's withdrawal and the boycott: "Fortunately, we have now at the UNESCO secretariat, some real friends. Both the new Director-General, M'Bow and the Head of the Scientific Division, Prof. A. Kaddoura—a nuclear physicist—are good and courageous friends who try to help us in every possible way . . . They will propose in the next meeting of Executive Board (Apr-May) for an increase of 28% of ICTP." Salam thus suggested to Weisskopf that he say "a word to the US delegation at UNESCO" in favor of their initiative.[87]

NEGOTIATING WITH THE BOYCOTTING SCIENTISTS

So far, I have not discussed Salam's strategy for dealing with the boycotting scientists. In order to analyse the director's modus operandi among the American scientists, it is necessary to look back to the summer of 1975. Salam suggested to Luciano Bertocchi, professor at the Institute of Theoretical Physics of Trieste University, that he contact some Israeli physicists during his trip to the United States to attend conferences. Salam thought that this would be a good occasion to investigate the magnitude of the attack without exposing the center or himself directly. Bertocchi could do what Salam could not: explain that the ICTP did not approve of the UNESCO resolutions either. Bertocchi provided Salam with a detailed report titled "Report of His Visit to US" explaining that the Israelis wanted the ICTP to issue a public statement against UNESCO. That would be enough, at least for some Israelis to lift the boycott. However, Salam had no doubts that signing any statement against UNESCO would jeopardize his negotiations to secure the financial stability of the center. Bertocchi, however, was in a position to sign such a letter. A few months later, he sent a letter in which the boundary between his personal opinion and the ICTP's official position was left deliberately unclear.[88] That was not enough for the Israelis. Although he did not recall the episode, in an interview with the author he eloquently speculated about the case:

> [I]t was clear that for certain things Salam, even if he wanted, probably preferred not to appear in first person. Because, after all, he was a United Nations officer . . . I was just a university professor. I had a sort of contract with the center as an adviser, but I was not directly responsible for it. Therefore, I could take a position that was a bit different. And, of course, knowing Salam, and remembering the general situation, this letter, if it was written, was written not *against* Salam's will, but I would say, instead, on Salam's suggestion.[89]

[86] Salam to M'Bow, Dec. 3, 1977, G.118, ASP.
[87] Salam to Weisskopf, March 3, 1976, G.120, ASP.
[88] See Adam Schwimmer, Avraham Rinat, and Julius Davis to Luciano Bertocchi, Jan. 29, 1976, G.122, ASP.
[89] Luciano Bertocchi, interviewed by author, Trieste, July 5, 1998 (my translation).

Avoiding direct public confrontation on political matters would preserve the boundary between science and politics. Salam was definitively not allowed to mix them. He must demonstrate that his political actions were completely disconnected from his politics. While the balance of power allowed the boycotting scientists to "politicize science," Salam could not. Furthermore, he was fully aware that his political strength depended on preserving an image of a nonpoliticized scientist. Indeed, Salam appealed to his allies to confront the political controversy.

Wu's letter to Salam following the conference provided him with an instrument to mobilize his allies. Wu's testimony showed that the boycott was motivated by ill feelings toward some members of the scientific community. Aware of its power, Salam forwarded the letter to several scientists in the third world as well as to some of his allies in the United States and Europe, including Aage Bohr, Kastler, and Weisskopf.[90] The decision and terms of their letter to *Physics Today,* published the following year, was triggered by their indignation after reading Wu's revelations:

> It would appear that the boycott is in itself an attempt to use a *bona fide* international scientific activity as an instrument in the political conflict. It was thus at variance with the very principle that provides the basis for the criticism of the developments in UNESCO.[91]

In the meantime, the development of the high-energy physics November Revolution was unfolding quickly. Pati and Salam knew that their theory would not stand on its epistemological merits alone; to survive it had to be circulated within the appropriate social circles. As I pointed out, the aim of the conference at Trieste was to have access to the experimenters. Salam, however, never had this chance at the ICTP, although, in the summer 1976 the center held a conference on the topic with the altered title "Lepton Interactions and *New Particles.*" Salam approached Wolfgang Panofsky, the director of SLAC, asking him to suggest names of participants. Panofsky replied dryly that arrangements should be made on a "personal basis" and that he could "not guarantee that some of the problems which beset your last conference may not arise again."[92] The 1976 conference was a failure for one reason: by then, as Pickering points out, "the critical phase of the November Revolution was over."[93] There was little space to convince the experimentalists to start a search for alternatives to charm and confinement. Apparently, Salam did not even go to the meeting; he had realized that the ICTP had been isolated from the high-energy physics revolution. A new "established tradition" was being created, and the ICTP could only learn what was happening elsewhere.

CODA

The boycott was the instrument some Israeli and pro-Israeli scientists deployed to sensitize and unify the American scientific community against the Arab boycott and, more generally, to favor any eventual Israeli countermeasure. Whatever the resolutions said, UNESCO represented an ideal opportunity to mobilize American scientific

[90] Kastler to Weisskopf, Dec. 1, 1975, G.120, ASP.
[91] Hans Bethe, Aage Bohr, Ben Mottelson, Victor Weisskopf, and John Ziman, "No Boycott for Trieste," *Physics Today* (June 1976): 9.
[92] Wolfgang K. H. Panofsky to Salam, Feb. 17, 1976, G.121, ASP.
[93] Pickering, *Constructing Quarks* (cit. n. 39), 268.

intellectuals, with the ICTP serving as a scapegoat. Scientists who boycotted the center had different motivations. However, their individual actions produced a global effect: a serious disruption in the ICTP activities and a debate about it.

What were the effects of the boycott? Boycotts are intended to produce political changes in the target. The boycotting scientists thought that denying scientific collaboration with the third world through the ICTP would pressure the delegations to reverse their decision about Israel. At the outbreak of the boycott, Leon Van Hove was confident that "under [Salam's] direction the Centre [would] avoid any form of political prejudice" and estimated that the crisis would last only a "few years."[94] Both judgments proved to be correct. The time factor is, in fact, crucial in a boycott; this form of sanction requires a sustained action during extended periods of time because of the complexity of the networks involved in the academic field. By 1977, after the UNESCO General Conference lifted the sanctions on Israel, independently from the boycott of the ICTP, the Trieste center was again running normally.

This episode shows the tensions and contradictions of international science.[95] In spite of being aware that a clear boundary between science and politics was essential for the public image of the ICTP, Salam carefully strengthened the link between the center and UNESCO during the negotiations and kept out of the public debate. He quickly realized that while the boycott was contingent, the shortage of funds was the real obstacle to the ICTP's consolidation as a research center. It was essential to avoid any direct confrontation because, otherwise, he would be charged with "politicizing" science. Accusing someone of "politicizing" science, as American and Israeli scientists did, is a political maneuver to discredit the opponent by showing that he or she is violating the supposedly neutral character of the scientific ethos. The ideological force of the scientists' own rhetoric about scientific internationalism lies in its power to mobilize allies, even though countermeasures, such as participating in a boycott, demonstrate the political character of science. Such behavior provides, perhaps, an ideal crucible in which to explore the contradictions of the practice of scientific internationalism.

In relation to the politics of international scientific cooperation, Elzinga points out that the idea of UNESCO as an intergovernmental organization, in which scientific actions were supposed to promote political consensus, instead of a nongovernmental organization, concerned with scientific knowledge, was the outcome of the Anglo-American "populism" during the initial negotiations. It was opposed by the French, who wanted a more "intellectual" UNESCO. One could add thus that, since its inception, the politicization issue has been part of the organization's history.[96] The Israel resolutions were manifestations of the process of "detechnicization" that M'Bow's administration represented in the history of that institution. It was not the politicization of the institution but an effort to bring it back to the "original more activist spirit of its Constitution," as conceived by its Anglo-American fathers-founders. Hence, rather than the politicization it was the repoliticization of UNESCO. Thirty years after the establishment of UNESCO, the positions about the politicization of

[94] L. Van Hove to Salam, Feb. 3, 1975, B.286, ASP.

[95] Ron Doel, "Scientists as Policy Makers, Advisors, and Intelligence Agents: Linking Contemporary Diplomatic History with the History of Contemporary Science," in *The Historiography on Contemporary Science and Technology,* ed. Thomas Söderqvist (Amsterdam, 1997), 215–44, 216.

[96] Elzinga, "Unesco and the Politics of Scientific Internationalism" (cit. n. 3), 90–1.

that institution were inverted. In the 1970s, Americans and Israelis presented such repoliticization as a misrepresentation of its "original" function. Conversely, the Europeans and third world nations saw UNESCO as a political institution. Indeed, politicization of science and scientific institutions is a free-floating boundary between knowledge and power that, during a controversy, every actor draws upon according to his or her own interests.