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Science, Fascism, and Foreign Policy: The Exhibition "Scienza Universale" at the 1942 Rome World's Fair

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Abstract: This essay analyzes the exhibition "Scienza Universale," which was to be a central part of the 1942 world's fair in Rome. Although in the end World War II kept the fair from happening, the plans for the exhibit were finished, and they allow for an in-depth analysis of the propagandistic uses of science in fascist Italy. The essay investigates what the regime sought to accomplish with a public display of science, why it chose to stress science's universal character, and how various stakeholders' motives played out in the exhibit design. Although fascism is not generally known for either its embrace of science or its internationalism, in this instance both played a major role in the way the state presented itself. "Universal Science," as depicted in the exhibit, carried messages that were meant to promote a fascist conception of civilization and world order and to stake out Italy's position *vis-à-vis* Nazi Germany in particular.

There is little doubt that science is an international enterprise, but the notion that its internationality is intrinsic—that scientific practice is automatically elevated above national differences and that scientists are natural cosmopolitans—lost its power of persuasion long ago. Perhaps the most devastating critique of that belief has been provided by Brigitte Schroeder-Gudehus, who since the 1960s has scrutinized the practices of international cooperation in science during the first half of the twentieth century, both in war and in peacetime.[1] She has con-

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[1] Brigitte Schroeder-Gudehus, *Deutsche Wissenschaft und internationale Zusammenarbeit, 1914–1928: Ein Beitrag zum Studium kultureller Beziehungen in politischen Krisenzeiten* (Geneva: Dumaret & Golay, 1966); and Schroeder-Gudehus, *Les scientifiques et la paix: La communauté scientifique internationale au cours des années 20* (Montreal: Presses Univ. Montreal, 1978).

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cluded that in periods of international tension scientists have proved to be just as nationalist and uncooperative as their fellow countrymen and that science by no means escapes the dynamics of international politics. Historians today study international cooperation and the travel, exchange, and circulation of scientific knowledge as accomplishments requiring various kinds of work, rather than as the automatic consequence of science's intrinsic universality.[2]

But if the inherent and exemplary internationalism of science is a myth, it is a myth that has accumulated a lot of mileage. For the claim that science presents a model for international cooperation has long been widespread; and it still lives on, in modified form, in political science doctrines such as neofunctionalism and the theory of epistemic communities.[3] As such, it is of major interest for the history of political thinking and the history of international relations and institutions. The last decade has seen an explosion of work on such subjects—on what David Armitage calls the "history of international thought" and on what Mark Mazower calls the "ideological origins" of organizations like the United Nations and the League of Nations. This work has demonstrated the growing importance of scientific expertise in international political bodies, from the League's various "technical" subcommittees to the technocratic bureaucracies of the European Union and the U.N.[4] It has also shown that "internationalism" has been a label for a wide variety of ideologies, ranging from socialist internationalism to free-trade internationalism, and even nationalist and evangelical varieties.[5]

So far, however, these findings have rarely been combined. While the importance of scientific expertise has been acknowledged, the ideological dimensions of science in international relations remain underscrutinized. International historians have generally separated expertise from ideology, and this is where historians of science can make important corrections. To some extent this has already started. Johan Schot and Vincent Lagendijk, for example, have identified "technocratic internationalism" as an ideology of international integration. And Mazower has addressed beliefs in "Science the Unifier" in his synthetic study of internationalisms. Still, while this work recognizes scientific internationalism as an -ism, it leaves its precise position on the political spectrum unclear. As an ideology it appears alongside various political internationalisms, not as a part of any one of them. One great exception to this tendency is Waqar Zaidi's work, which shows how notions of science were implicated in varieties of liberal internation-

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[2] Work along these lines is rapidly proliferating. Seminal publications are James A. Secord, "Knowledge in Transit," *Isis*, 2004, 95:654–672; Kapil Raj, *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650–1900* (Basingstoke: Palgrave Macmillan, 2007); and Simon Schaffer *et al.*, eds., *The Brokered World: Go-Betweens and Global Intelligence, 1770–1820* (Sagamore Beach, Mass.: Science History, 2009).

[3] Classic studies are David Mitrany, *A Working Peace System: An Argument for the Functional Development of International Organization* (London: Oxford Univ. Press, [1944]); Ernst B. Haas, *The Uniting of Europe: Political, Social, and Economic Forces, 1950–1957* (Stanford, Calif.: Stanford Univ. Press, 1958); and Peter M. Haas, "Introduction: Epistemic Communities and International Policy Coordination," *International Organization*, 1992, *46*:1–35.

[4] David Armitage, "Modern International Thought: Problems and Prospects," *History of European Ideas*, 2015, *41*:116–130; and Mark Mazower, *No Enchanted Palace: The End of Empire and the Ideological Origins of the United Nations* (Princeton, N.J.: Princeton Univ. Press, 2009). Regarding the increasing importance of scientific expertise in international political bodies see esp. Susan Pedersen, "Back to the League of Nations," *American Historical Review*, 2007, *112*:1091–1117; Patricia Clavin, *Securing the World Economy: The Reinvention of the League of Nations, 1920–1946* (Oxford: Oxford Univ. Press, 2013); Pedersen, *The Guardians: The League of Nations and the Crisis of Empire* (Oxford: Oxford Univ. Press, 2015); and Glenda Sluga, *Internationalism in an Age of Nationalism* (Philadelphia: Univ. Pennsylvania Press, 2013).

[5] For the nineteenth century alone, Mark Mazower distinguishes about half a dozen kinds of internationalism in *Governing the World: The History of an Idea, 1815 to the Present* (New York: Penguin, 2012), Chs. 1–3. An outline of different brands of scientific internationalism can be found in Geert Somsen, "A History of Universalism: Conceptions of the Internationality of Science, 1750–1950," *Minerva*, 2008, *46*:361–379.

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alism.[6] But studies of other political conceptions of science as a guide to international relations remain few and far between.

And yet they were there. The use of science as a model for international relations has always been political, while at the same time it has never been the monopoly of any particular orientation. Liberals saw science as showing the way in international affairs, but so did socialists and, in different ways, various conservatives. In this essay I want to highlight this political diversity by discussing an extreme variety: fascist scientific internationalism. Although fascism is not commonly known for its internationalism or for its dedication to science, such an ideology was in fact developed in Italy during the last decade of Benito Mussolini's regime—and with its active support.[7] It found its greatest expression—and the manifestation I will focus on—in the grand "Mostra della Scienza Universale," the Exhibition of Universal Science that was to be one of the cornerstones of the thirty-fourth official world's fair that the Italian government organized to be held in Rome in 1942.[8] In the end, World War II blocked the realization of this event, but by that point the plans for the science exhibit were practically finished.[9] The source material pertaining to the planning process therefore allows for a rich analysis of what "universal science" stood for in Italian fascists' eyes and why they chose it as one of the main vehicles for presenting themselves to the world. In what follows I will discuss the setup of the science exhibit and its underlying political aims. I will pay particular attention to the vision of world order that the display sought to sustain—especially since the map of Europe changed drastically between 1938 and 1941, forcing the exhibition planners to adapt their strategies. I will also consider the many scientists who worked on the exhibit and examine their motivations. Finally, I will look at conflicting views within the fascist establishment and how these played out in the science exhibit. It will become clear that the fascists' projections of science were highly nationalist. But at the same time they were internationalist, in that they stressed the universality of science and used that to reflect a certain hierarchy of nations. This will be the subject of the conclusion.

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[6] Johan Schot and Vincent Lagendijk, "Technocratic Internationalism in the Interwar Years: Building Europe on Motorways and Electricity Networks," *Journal of Modern European History*, 2008, 6:196–217; Mazower, *Governing the World*, Ch. 4; and Waqar Zaidi, "Technology and the Reconstruction of International Relations: Liberal Internationalist Proposals for the Internationalisation of Aviation and the International Control of Atomic Energy in Britain, USA, and France, 1920–1950" (Ph.D. diss., Imperial College, 2008). See also Zaidi, "'Aviation Will Either Destroy or Save Our Civilization': Proposals for the International Control of Aviation, 1920–45," *Journal of Contemporary History*, 2011, *46*:150–178; and Zaidi, "'A Blessing in Disguise': Reconstructing International Relations through Atomic Energy, 1945–1948," *Past and Present*, 2011, *210*:309–331.

[7] On nonscientific fascist internationalism see Michael Arthur Ledeen, *Universal Fascism: The Theory and Practice of the Fascist International, 1928–1936* (New York: Fertig, 1972); Benjamin G. Martin, *The Nazi-Fascist New Order for European Culture* (Cambridge, Mass.: Harvard Univ. Press, 2016); and Matteo Albanese and Pablo del Hierro, *Transnational Fascism in the Twentieth Century: Spain, Italy, and the Global Neo-Fascist Network* (London: Bloomsbury Academic, 2016).

[8] Little has been published about this exhibit. The most comprehensive account is Paolo Galluzzi, "La storia della scienza nell'E 42," in *E42: Utopia e scenario del Regime*, Vol. 1: *Ideologia e programma per l'Olimpiade delle civiltà*, ed. Tullio Gregory and Achille Tartaro (Venice: Cataloghi Marsilio, 1987) (hereafter cited as **Gregory and Tartaro, eds., *E42***), pp. 53–69. An overall analysis of the role of science and technology at the planned 1942 world's fair is Robert Kargon, Karen Fiss, Morris Low, and Arthur Molella, *World's Fairs on the Eve of War: Science, Technology, and Modernity, 1937–1942* (Pittsburgh, Pa.: Univ. Pittsburgh Press, 2015), Ch. 6. The science exhibit is briefly discussed in Elena Canadelli, "I musei scientifici," in *Scienze e cultura dell'Italia unita*, ed. F. Cassata and C. Pogliano (*Storia d'Italia: Annali*, 26) (Turin: Einaudi, 2011), pp. 867–893, esp. pp. 885–889; and Martin, *Nazi-Fascist New Order for European Culture*, Ch. 5. For a synthesis of insights into science under Mussolini see Roberto Maiocchi, *Scienza e fascismo* (Rome: Carocci, 2004).

[9] A report on the state of the project in early 1942 stated that of the fourteen planned grand edifices, three had been completed, ten had structures that were 80 percent finished, and for one only the foundations had been laid. See "L'Esposizione Universale di Roma," Archivio Centrale dello Stato (Rome), Ente Autonomo Esposizione Universale di Roma—E42, VI Servizi Organizzazione Mostre (hereafter **EUR Exhibit Papers**), busta (envelope) 49, fasc. (file) 213.

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THE EXHIBITION OF UNIVERSAL SCIENCE

The "Esposizione Universale di Roma" (EUR, also known as E'42) was first announced in 1936 by *Il Duce* himself, but its author was Giuseppe Bottai, then governor of Rome and one of the fascist party's chief ideologues.[10] The exposition was planned for 1942, the year of the twentieth anniversary of fascist rule. (See Figure 1.) It was to be situated south of Rome in a new quarter that was part of a larger plan to extend the city along the river Tiber, the so-called "Terza Roma" (third Rome) plan. When World War II broke out, preparations were well under way, and it was hoped that the exhibit could still take place after hostilities ended—if necessary at a later date. Planning continued until the spring of 1943 and seems to have come to a standstill only with the fall of Mussolini on 25 July and the ensuing German take-over of the northern half of Italy, including Rome.[11]

The Exhibition of Universal Science was one of the most prominent exhibits to be part of the world's fair and one of only four that were to be turned into a permanent museum after the E'42 was over. It consisted of various subexhibitions dealing with branches of science (biology, physics, chemistry, etc.), which were themselves sometimes split into smaller parts on subdisciplines such as entomology, mechanics, radioactivity, and so on. Each part was to showcase the most important findings and insights of its particular field by means of photographs, diagrams, models, and demonstration experiments, set up with instruments especially built for the occasion.[12] The general framework was historical: the various exhibits were to tell stories of discovery and the progressive advancement of the sciences from antiquity up to the present—the chemistry exhibit, for example, went from ancient alchemy through Lavoisier's revolution to Avogadro, Cannizzaro, and "our day." There were no explicit limitations on expenditure, and the exhibition planners were encouraged to design lively and attractive shows, using the latest presentation technologies.[13] Altogether, the "Mostra della Scienza Universale" was to be one of the largest expositions at the fair, and each of its subexhibitions was comparable in size to, for example, the aeronautics display and the fascist party exhibit that were also planned for the EUR. Accordingly, its "Palazzo" was one of the largest buildings—and, indeed, one of the few that had been completed by the time the fair was canceled.

The director of the entire world's fair was the Venetian shipping magnate and fascist senator Vittorio Cini. He oversaw a range of organizations that took care of the building activities, tourism planning, publicity, and the arts program, as well as the several exhibitions themselves. The science exhibit was created by a planning committee, consisting of a dozen prominent university scientists from all over Italy and representing the various branches of natural science and

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[10] Patrizia Ferrara, "L'EUR: Un Ente per l'E 42," in *E42*, ed. Gregory and Tartaro, pp. 73–83, on p. 73; and Sabino Cassese, "Bottai, Giuseppe," in *Dizionario biografico degli Italiani*, Vol. 13 (Rome: Istituto della Enciclopedia Italiana, 1971), p. 400. There is a vast literature on the EUR, most of which treats its architecture and city planning. On its ideology see esp. the essays in Gregory and Tartaro, eds., *E42*; Maurizio Calvesi, Enrico Guidoni, and Simonetta Lux, eds., *E 42: Utopia e scenario del regime*, Vol. 2: *Urbanistica, architettura, arte e decorazione* (Venice: Marsilio, 1987); and V. Vidotto, ed., *Esposizione Universale Roma: Una città nuova dal fascismo agli anni '60* (Rome: De Luca, 2015).

[11] A committee to oversee the execution of the final plans for the science exhibit was still registered on 17 May 1943. The archived folders of its subsequent activities are empty. See "Comitato Esecutivo Mostra Scienza," EUR Exhibit Papers, busta 1011, fasc. 9770, s.fasc. (subset) 2, ins. (insert) 40/A.

[12] For example, the physics exhibits included a Foucault pendulum, an x-ray machine, electrolysis demonstrations, and a display of radioactive substances with audible radiation impacts. Each plan detailed the required floor space, budget, and expected electricity (in kW), water, and gas use. All plans are kept in the folders *Mostra della Scienza (Edificio permanente)*, EUR Exhibit Papers, busta 1047, fasc. 9981, s.fasc. 1.

[13] *Ibid.*, ins. 2 (quotation). Later versions of the plans show a reduction in the number of instruments and propose a small in-house workshop for their maintenance. See Giovanni Gallarati, "Premessa," EUR Exhibit Papers, busta 1011, fasc. 9770, s.fasc. 2, ins. 37.

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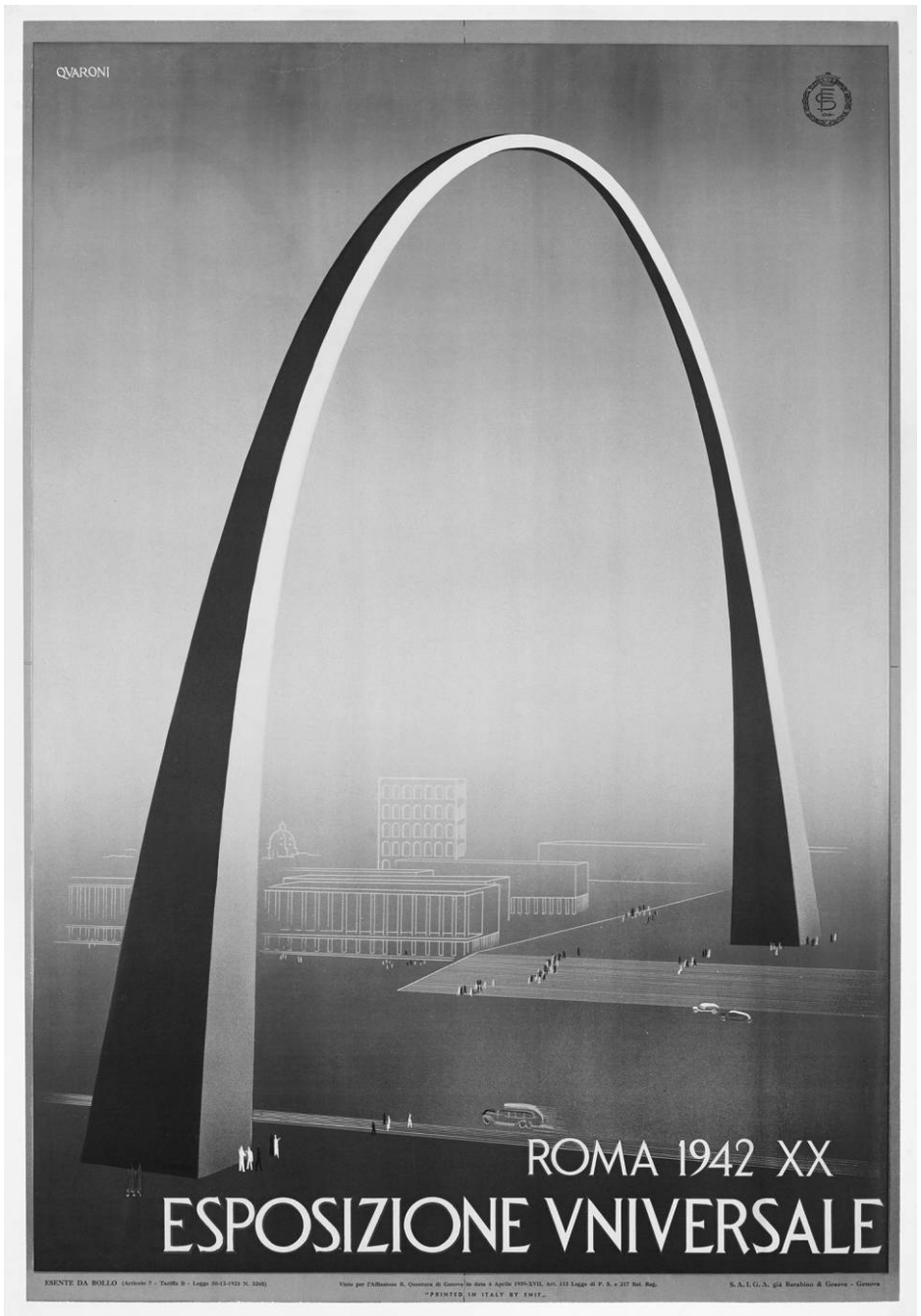

Figure 1. The official poster for the world's fair. The original plans featured a gigantic steel arch as a wonder of Italian engineering. The "XX" in the caption refers to the year 1942 as expressed by the fascist calendar, which took the March on Rome of 1922 as its starting point.

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engineering. Its president was Francesco Giordani, a Neapolitan chemistry professor and entrepreneur. Its vice president was Sabato Visco, a nutrition scientist and president of the science faculty of the University of Rome. The planning committee would form various subcommittees for the different subexhibits, taking on an increasing number of members until, by 1942, some 230 of Italy's "best scientists . . . from all the universities' professorships" had contributed to the making of the exhibition.[14]

Certainly not all of these contributors or even all the planning committee members were active fascists or party members. President Giordani, for example, was not. Visco, on the other hand, had been in the fascist movement from the beginning and had even been part of Gabriele d'Annunzio's militia that occupied Fiume, the former Habsburg city that the fascists claimed for Italy, in 1919. Visco was also a racial theorist, the head of the government's Office for the Study and Propaganda of Race, and a member of the High Council of Demography and Race—but he was no supporter of the Nazi-style anti-Semitism that Mussolini launched in 1938. Visco and his fellow committee members actually resisted this policy and made sure to keep it out of the subexhibit on "Hygiene and Race" that the regime wanted them to incorporate.[15] This is not to say that they were antiracists, however, and they readily accepted the 1938 dismissal of their Jewish colleagues from university life, among them respected historians of science whose expertise could have been central in preparing the exhibit.[16] Generally speaking, the fascist loyalties of the exhibit planners were secure. They had not been especially vetted for their fanaticism, but neither had they refused to take the oath of allegiance to the regime that had been required of all university professors since 1931 (a requirement with which 99 percent complied). What ensured their cooperation more than anything else, however, was a mechanism that Ruth Ben-Ghiat has observed operating among Italian intellectuals in general: they became collaborators in fascist policies even though—indeed, precisely because—no particular political grandstanding was demanded. At the E'42 this strategy was very effective, and almost every scientist, scholar, or architect who was asked agreed to cooperate.[17] At the same time, these collaborators were not all aware—nor did they need to be aware—of the world's fair's specific propagandistic aims. Those were the responsibility of Cini and various general exhibition planners, among them Giovanni Gallarati, who read and redacted exhibition plans to ensure that they presented the right story lines to the visiting public. Thus the political goals were safeguarded and kept clearly in view, even if they were not shared with, or familiar in detail to, each contributing scientist.[18]

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[14] "Appunti per la Riunione col Ministro Bottai in Merito alla 'Mostra della Scienza' all'E.U.R. e al 'Museo Nazionale della Tecnica' in Milano," p. 6, EUR Exhibit Papers, busta 1011, fasc. 9770, s.fasc. 2, ins. 38 (here and throughout this essay, translations into English are mine unless otherwise indicated). *Il Duce* appointed the planning committee on 27 Nov. 1937: EUR Exhibit Papers, busta 1007, fasc. 9770, s.fasc. 2, ins. 2.

[15] On this "Mostra della Sanità e della Razza" see Galluzzi, "La storia della scienza nell'E 42" (cit. n. 8), pp. 66–68. Italian racism was a complicated affair, partly because the term "*razza*" was used synonymously with "*popolo*" ("people") and "*nazione*" ("nation"). Most racial scientists rejected the Nazi policies of persecution and eradication. Visco was not aware that his signature had been appended to the radical *Manifesto degli Scienzati Razzisti* (1938); he would not have signed had he been asked, and he was not happy when he learned about it. He belonged to Nicola Pende's "spiritualist" school of racial theory. On the latter see Maiocchi, *Scienza e fascismo* (cit. n. 8), Ch. 5; and Claudia Mantovani, *Rigenerare la società: L'eugenetica in Italia dalle origini ottocentesche agli anni Trenta* (Soveria Mannelli: Rubbettino, 2004), p. 327. On Italian intellectuals and racism see Ruth Ben-Ghiat, *Fascist Modernities: Italy, 1922–1945* (Berkeley: Univ. California Press, 2001), pp. 148–157.

[16] Notable among these figures were Giulio Provenzal and Federico Enriques. Enriques had been suggested in 1937 as an expert who might help with the exhibit. See Eugenio Garin, "La civiltà italiana nell'Esposizione del 1942," in *E42*, ed. Gregory and Tartaro, pp. 3–16, esp. p. 9.

[17] Ben-Ghiat, *Fascist Modernities* (cit. n. 15), pp. 1–4, 8–12; and Garin, "La civiltà italiana nell'Esposizione del 1942," p. 8.

[18] The political aims of the E'42 were also kept hidden from the public. As Cini made clear, the fair's messages, although "essentially political," had to be presented almost unnoticeably: "To conquer without saying so and without appearing to say so.

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EXHIBITING IDEAS

The E'42 was supposed to be a regular world's fair and was officially registered with the Bureau International des Expositions, the general coordinating body for such events. But from the start it was also meant to differ from previous universal expositions. Traditionally, these had been characterized by an emphasis on industrial products, technological progress, and consumer goods—the statue ("La Parisienne") that greeted visitors to the 1900 Paris exhibition was a fashionably dressed metropolitan woman, and the 1939 New York World's Fair would be dominated by corporations like Ford and General Electric.[19] Such materialism ran counter to the kind of civilization that the Italian fascists wanted to showcase. They saw it as part of a consumerist liberal democratic order that was in its final, decadent phase. Fascism, in contrast, represented a spiritual, heroic, and collectivist mentality that was young, dynamic, and strong. This idea of a clash of civilizations owed much to pessimistic cultural analyses of the period, such as *Decline of the West* by Oswald Spengler, an author deeply admired by Mussolini (and vice versa). It also largely reproduced the old German opposition of *Zivilisation* versus *Kultur*. The Italian expression was "*civiltà*," a word formerly used to denote French and Western civilization that now came to signify its Italian counterpart.[20] The E'42 was to be a manifestation of *civiltà* and its spiritual conception of civilization. As the first general plan made clear, this would mark a move away from the materialism, the consumerism, and the cheap sensationalism of the preceding world's fairs, "especially the American one [then being prepared], which has tried and will try to amaze the world by its proportions, the exhilaration of its mechanical achievements, and the hallucination of material happiness."[21] Such delights were shallow; all they really indicated was the degenerate state of Western culture. Fascism would be pitched against that culture on the stage of the E'42, in what was officially called the "Olympics of Civilizations" (*L'Olimpiade delle Civiltà*).

This general plan served as a guideline for the various parts of the Rome World's Fair, including the science exhibit. Nevertheless, the planning committee for the latter studied recent world's fairs and made plans to visit upcoming expositions and existing science museums, such as the Deutsches Museum in Munich, the Science Museum in London, and the Palais de la Découverte in Paris (itself a remnant of the 1937 universal exposition). What they especially appreciated in the latest exhibits was the dynamic style of presentation that was being developed in the 1930s and that reached its culmination in the New York World's Fair.[22] But what the planning committee wanted to move away from, in line with the general E'42 program,

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That is the program." See Commissariato Generale, "Programma di Massima," typescript, sent by Vittorio Cini to Benito Mussolini on 25 June 1937, pp. 1, 7. A facsimile of this document has been printed in Gregory and Tartaro, eds., *E42*, pp. 153–156.

[19] See Brigitte Schroeder-Gudehus and Anne Rasmussen, *Les fastes du progrès: Le guide des expositions universelles, 1851–1992* (Paris: Flammarion, 1992); Robert W. Rydell, *World of Fairs: The Century-of-Progress Expositions* (Chicago: Univ. Chicago Press, 1993); and Kargon *et al.*, *World's Fairs on the Eve of War* (cit. n. 8). Karen Fiss discusses how this traditional emphasis was confronted with Nazi propaganda at the Paris 1937 expo in *Grand Illusion: The Third Reich, the Paris Exposition, and the Cultural Seduction of France* (Chicago: Univ. Chicago Press, 2009).

[20] The idealist philosophers Benedetto Croce and Giovanni Gentile had set the antimaterialist tone early in the fascist regime, the latter becoming Minister of Public Education in 1922. On Italian fascism's philosophy of culture and the meanings of "*civiltà*" see Martin, *Nazi-Fascist New Order for European Culture* (cit. n. 7), Ch. 4. The Italian adjective "*spirituale*," often used in opposition to "*materiale*," had a wider meaning than the English "spiritual" and could also mean "intellectual." I translate it both ways.

[21] "Programma di Massima" (cit. n. 18), p. 6. The document added that the New York exposition motto, "The World of Tomorrow," should more accurately be replaced by "Comfortable Life"—the E'42 would show the true world of tomorrow. After 1938, anti-American and anti-French posturing became part of the regime's general "cultural reclamation" campaign. See Ben-Ghiat, *Fascist Modernities* (cit. n. 15), Ch. 5.

[22] On the change of presentation style embodied in the New York World's Fair see *Exhibition Techniques* (New York: New York Museum of Science and Industry, 1940).

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was the focus on machines and gadgets, on spectacular technologies that dazzled the audience. Such presentations might impress the viewers, but in fact they blinded fairgoers to the true origins of all technological developments: the basic scientific ideas, laws, and "essential principles" that lead to technological applications. These exhibitions presented "the story of the solutions given by science, . . . not the story *of science*."[23] The Rome exhibition would do things differently. It would focus not on technical but on scientific progress: "We think of the Mostra della Scienza Universale as the illustration of the development of scientific *thought*."[24]

This focus on ideas rather than artifacts, on mind instead of matter, was fully in line with the EUR's general aim to celebrate civilization in its spiritual sense. At the same time, it served a number of more specific goals. One purpose of the science exhibit was to establish in the public "trust in and conviction of the necessity of pure [scientific] research." All too often, the planning committee wrote in a report, lay people were skeptical as to the value of scientists "locked up in [their] laboratories," performing useless "experiments that seem like games or follies" merely to satisfy their own egotistic desires. "We have to destroy this belief, because every one of these individuals works not for himself but for humankind." After all, in the long run each of these purely intellectual pursuits could produce the seeds "of new technical progress, of wealth, of health, of power," while every material application had had its origins in ideas created for their own sake. The exhibit would demonstrate this vital truth and foster support for pure science among the "great masses." Speaking to them was important, as "from . . . the anonymous and amorphous public always come the energies that allow science to progress."[25]

The planning committee chose formulations that displayed a certain respect for the "pubblico popolare"—which, after all, was a good part of its audience and the alleged power base of the regime that was organizing the world's fair. But its argumentation was also quite elitist, asking citizens to give scientists full financial support and total freedom. Such a defense of pure science reflected the makeup of the planning committee, all of whose members were university professors. At the same time, it formed a response to current science policies. As Paolo Galluzzi has shown, the government's recent autarky program tended to stress the value of applied science, and this elicited protest from Visco and other committee members. Still, the choice to highlight pure science was not just an academic preference. Cini, for example, whose only academic affiliation had been his time as a business school student in Switzerland, wholeheartedly defended this focus, as we will see below. And Gallarati, the exhibition's spin doctor, felt exactly the same way. For him, exhibitions on applied science or technology were boring and outdated, "deprived of any light and any poetry." The "pragmatists and materialists . . . , in

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[23] "La Mostra della Scienza Universale," p. 1 (emphasis in the original), EUR Exhibit Papers, busta 1007, fasc. 9770, s.fasc. 2, ins. 2/B. This plan was circulated in March 1939. The planning committee was more negative about London, Munich, and the New York "Museo di Scienze Naturale" (they probably meant the Museum of Science and Industry, established in 1936) than about the Paris museum, which they felt correctly stressed scientific ideas over applications. Exhibit designer Gallarati, however, also rejected this "Louvre of Science" for presenting science as a "method for the conquest of wealth, fortune, and power": Gallarati, "Premessa" (cit. n. 13), p. 2. On the design of the Palais de la Découverte see Andrée Bergeron and Charlotte Bigg, "D'ombres et de lumières: L'exposition de 1937 et les premières années du Palais de la découverte au prisme du transnational," *Revue Germanique Internationale*, 2015, *21*:187–206.

[24] "La Mostra della Scienza Universale," p. 4 (emphasis added). Interestingly, the Rockefeller Foundation, which studied science popularization around this time, was reaching similar conclusions and also wanted to move away from industrial shows. See Jaume Sastre-Juan, "Philanthropy, Mass Media, and Cultural Hegemony: The Rockefeller Foundation and the Politics of Science Popularization in the 1930s," in *Gramsci Today: Cultural Hegemony in a Scientific World*, ed. Massimiliano Badino and Pietro Daniel Omodeo (Leiden: Brill, in press).

[25] "La Mostra della Scienza Universale," pp. 5–6, 7. The exhibit's historical orientation was also very much in line with Gentile's Hegelian historicism, as built into his educational reform proposals.

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deriving science from the economy, make it a monster without a soul." An exhibition of ideas, on the other hand, would be "dramatic," "theatrical," an adventure in thought, with the scientists as "heroes." Pure theoretical science, far from being dry and abstract, could be rendered exciting, daring, and dynamic: "the poetical creation of spirits, believers in a rational world order." Hence the choice to focus on pure science represented more than the university professors' interest. It also reflected a fascist preference for the heroism of spirit, a preference that was to permeate the entire fair. On this point academic and fascist views coincided.[26]

SHOWING THE WORLD

A second aim of the exhibit was to rehabilitate the contributions made by Italian scientists to the advancement of universal knowledge. Italian work, the planners argued, had often been forgotten, largely because it tended to consist of initial ideas rather than later applications that were more tangible and conspicuous. But the seminal "creative sparks" should also be made visible, and this could be accomplished "through a rigorous demonstration that can only be produced by an Exhibition of the importance of the one that we are going to realize." The science exhibit would have unique capacities to produce this national rehabilitation, but it was by no means the first attempt. A series of similar initiatives had been launched with increasing frequency during the interwar period. Most recently (and most blatantly), a string of publications had portrayed Leonardo da Vinci as the true inventor of the airplane, the automobile, the helicopter, the automatic weaving loom, and all sorts of other modern machines that could already be recognized in his sketches.[27] A comparable sense of national pride underlay a more general upsurge of interest in Italy's scientific heritage that had begun somewhat earlier. Apart from the publication of Leonardo's manuscripts in a series of hefty volumes (1923–1938), this interest was manifested in the establishment of an Institute for the History of Science (Florence, 1925), a National Exhibition of History of Science (Florence, 1929), the republication of the National Edition of Galileo's complete works (1929–1939), a Museum of the History of Science (Florence, 1930), an exhibit on Leonardo da Vinci and Italian inventions (Milan, 1938–1939), the founding of the Domus Galilaeana (Pisa, 1942; however, the project was initiated in 1939), and at least two more attempts to create Italian history of science museums, one of which was realized after World War II.[28]

Some of these initiatives were mainly private. The physician Andrea Corsini, for example, was a driving force behind many of the Florentine undertakings and seems to have been led by a personal passion for history of science more than anything else. But others were more strategic, and in many cases the fascist establishment took an active interest. The Milanese *fasci di combattimento* staged the Leonardo exhibit. Mussolini himself attended meetings of the Institute for the History of Science and supported the exhibition in Florence, calling it "a new and beautiful enterprise, worthy of Florence and of fascist Italy." And Bottai, who sat on the

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[26] Galluzzi, "La storia della scienza nell'E 42" (cit. n. 8), pp. 60–61; Gallarati, "Premessa" (cit. n. 13), pp. 1–3; and "La Mostra della Scienza Universale," p. 1.

[27] "La Mostra della Scienza Universale," p. 5 (quotation); and Galluzzi, "La storia della scienza nell'E 42," pp. 54–56.

[28] Guido Ucelli tried to establish a museum of science and industry in Milan (more about this below), an effort that succeeded in 1953. Carlo del Lungo tried to create a museum for the history of Italian science and failed. On the latter see Marco Beretta, "Andrea Corsini and the Creation of the Museum of the History of Science in Florence (1930–1961)," in *Scientific Instruments on Display*, ed. Silke Ackermann, Richard L. Kremer, and Mara Miniati (Leiden: Brill, 2014), pp. 1–36, esp. pp. 9–10. The desire for Italian rehabilitation was strong, but a focus on national accomplishments, often by way of international comparison, was not uncommon at the time. See Tom Scheinfeldt, "The International Context and the Context of Internationalism," in *Science for the Nation: Perspectives on the History of the Science Museum*, ed. Peter J. T. Morris (New York: Palgrave Macmillan, 2010), pp. 294–311.

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board of the Domus Galilaeana, declared that the "Galilean tradition of the experimental method" explained Italy's steady rise in the world of science.[29] Nor did the government take a merely passive support role. As Marco Beretta has shown, when Chicago organized the international exposition "The Century of Progress" in 1933–1934, Mussolini took the initiative and asked Guglielmo Marconi, the inventor of radio and a major fascist celebrity, to prepare "a collection of copies of valuable relics and documents aimed at demonstrating the extent of the contribution made by our country to the scientific and technical progress of humanity."[30] These copies were to be donated to the museum that would arise out of the Chicago exhibit, while two other sets should go to the Science Museum in London and the Deutsches Museum in Munich. The highest fascist authorities found it important that such institutions should be made aware of the significance of Italy's contributions to the progress of science and help spread that message to the world.[31]

With its aim to restore the reputation of Italian science in the eyes of the world, then, the science exhibit at the E'42 was part of an ongoing tradition. Few of the members of the planning committee had been involved in earlier exhibitions, but they were well aware of them, had attended some, and had in a few cases even requested materials to be reused at the show in Rome.[32] What was different about the science exhibit at this planned world's fair, however, was its explicit and almost exclusive focus on ideas—the spiritual dimension that was characteristic of the program of the E'42 at large. If Italian scientists were to be rehabilitated in recognition of their contributions to the progress of science, it was the intellectual dimension of these contributions that was to be emphasized—the creative sparks, not the finished products. This was the sense of Italian civilization that the exhibition aimed to communicate.

A CIVILIZING MISSION

A final aim of the science exhibit, and the most generally important one, was to express Italy's civilizing mission. This goal underlay the entire world's fair, which had been conceived right after, and in direct relation to, the Italian Abyssinian campaign of 1935–1936. Italy had already held Libya, Somaliland, and Eritrea, but it was the conquest of Ethiopia that led Mussolini to proclaim his country an empire before a large, cheering crowd on the Piazza Venezia on 9 May 1936. Within fifty days, he also announced the plan for the universal exposition. Giuseppe Bottai would later attribute the coincidence of these two proclamations to *Il Duce*'s visionary genius.[33] But it was Bottai himself who, as the EUR's *auctor intellectualis* as well as a participant in the Ethiopian campaign and, for a brief moment, governor of Addis Ababa, had proposed the exhibition as a corollary of the empire.

What connected the two was that the new Italian imperial identity changed the role of fascism as an ideology. From its inception, fascism had presented above all a program for *national* renewal. Its supporters had always had their eyes on foreign territories, but these tended to belong to "L'Italia irredenta," areas that (they thought) belonged to Italy proper but had fallen

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[29] Beretta, "Andrea Corsini and the Creation of the Museum of the History of Science in Florence"; and Galluzzi, "La storia della scienza nell'E 42" (cit. n. 8), pp. 55–56 (quoting Mussolini and Bottai).

[30] See Guglielmo Marconi to Andrea Corsini, 29 Oct. 1932, quoted in Beretta, "Andrea Corsini and the Creation of the Museum of the History of Science in Florence," pp. 15–16. On Marconi's own support of fascism see Marc Raboy, *Marconi: The Man Who Networked the World* (New York: Oxford Univ. Press, 2016), pp. 549–667.

[31] Similarly, the Ministry of Popular Culture lent the Leonardo exhibit to the Museum of Science and Industry in New York. See *An Exhibition of the Scientific Achievements of Leonardo da Vinci* (New York: Vigo, 1940).

[32] Enrico Luciani (director of the Exhibits Organization Service) to Oppo, 5 July 1939; Vittorio Cini to Duca Pietro Badoglio, 13 July 1939; and Girolamo Oldofredi to Cini, 28 July 1939: EUR Exhibit Papers, busta 1010, fasc. 9770, s.fasc. 2, ins. 22.

[33] Garin, "La civiltà italiana nell'Esposizione del 1942" (cit. n. 16), p. 3.

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into foreign hands, especially after the treaties of 1919. In the 1930s, however, Mussolini increasingly stressed his country's need to expand beyond existing national boundaries and gain colonial possessions to support its growing production and population. The guiding concept here was "*spazio vitale*," the space the nation needed to live and breathe. Bottai was the main theorist of *spazio vitale*, and he saw national expansion as a civilizing project. Italy would not just gain new territory but would also contribute something to the colonized peoples: "Italians will illuminate the world with their art, educate it with their knowledge, and give robust structure to their new territories with their administrative technique and ability, with their enterprise and organization of trade."[34] Everything that made fascist Italy so strong and successful would be transferred to the receiving, subjected populations. Fascism had become an export product.[35]

The world's fair was supposed to express something similar. Italy's culture and fascism's political way of life were meaningful and valuable for the whole world, a civilization that was well worth spreading. The very first plans, written up, at Bottai's request, by Federico Berchet, an organizer of annual fairs in Padua, pointed out that fascism no longer had a strictly national significance. It presented a "new vitality that all the peoples of the world end up bowing before." The exhibition's main task was the "presentation of Fascist Corporatism so that all the peoples can understand it, convince themselves, and adopt it."[36] In a less aggressive announcement for representatives of the domestic and foreign press, Cini stated that the world's fair's "essential character, which I want to highlight immediately, is that of *universality*. . . . The Exposition will be the synthesis of Italian and universal civilization."[37] This "synthesis" did not mean that Italian and other cultures would be blended but, rather, that the *civiltà* the exhibition would demonstrate was both Italian and universally significant.

The chief manifestation of that program was the EUR's most central exhibit, the "Mostra della Civiltà Italiana." It documented the entire heritage of Italian culture, from the Middle Ages through the *Rinascimento*, the *Risorgimento*, and on to the glorious rise of fascism and the establishment of empire. A similar message was expressed by the "Mostra della Civiltà Romana," which showed that the Romans too had had a civilizing mission, one largely comparable to the modern fascist version. The message was that Italian and Roman civilization were one and timeless, just as they were also universal and placeless—that is, originating in Italy, with meaning for the entire world.[38] (See Figure 2.)

The science exhibit displayed these aspects *a fortiori*. Timelessness was built into the presentation by a focus on discoveries. The narrative of the exhibit was historical, but the facts, laws, and principles discovered were as meaningful today as in the period when they were found. Many of the old experiments were to be replicated live at the exhibition, using modern

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[34] Giuseppe Bottai, "Contributi dell'Italia al nuovo ordine," quoted in Davide Rodogno, *Fascism's European Empire: Italian Occupation during the Second World War* (Cambridge: Cambridge Univ. Press, 2006), p. 46. *Spazio vitale* is related to the Nazi concept of *Lebensraum* but included the element of a civilizing mission.

[35] In 1930, Mussolini had also declared fascism ready for export and instigated a series of international fascist conferences organized by the Comitati d'Azione per l'Universalità di Roma. The last of these took place in 1935, by which time Italy's leading role had been eclipsed by that of Germany. See Ledeen, *Universal Fascism* (cit. n. 7); and Martin, *Nazi-Fascist New Order for European Culture* (cit. n. 7), Ch. 4.

[36] Federico Pina Berchet, "Progetto di Massima per una Esposizione Universale Romana," typescript, handed to Giuseppe Bottai in April 1935 and sent on to Mussolini on 15 June 1935, p. 3. A facsimile of this document is reprinted in Gregory and Tartaro, eds., *E42*, pp. 149–150.

[37] Vittorio Cini, "Aspetti e problemi fondamentali" (press conference, 12 Jan. 1937), EUR Exhibit Papers, busta 49, fasc. 213.

[38] See the program laid out in *Mostra della Civiltà Italiana: Criteri fondamentali per la presentazione della Mostra* (Rome: Castaldi, 1939). Berchet called the Italians "the most ancient and the most novel race" in "Progetto di Massima per una Esposizione Universale Romana" (cit. n. 36), p. 5.

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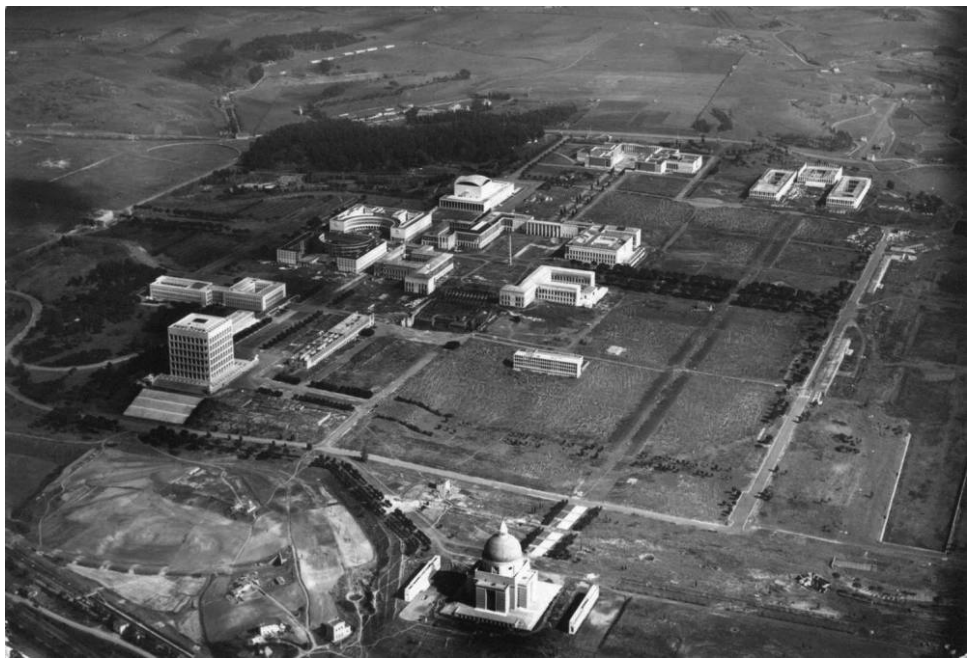

Figure 2. Aerial view of the world's fair grounds in 1953; this is the state they were left in when construction work was halted. The architecture of colonnades and mosaics referred directly to the Roman past, as did the building in the foreground, known as the "Square Colosseum." The obelisk was meant to be dedicated to Guglielmo Marconi, the inventor of radio, and would hold a transmitter antenna. The science exhibit was to occupy the building complex right behind it.

instruments.[39] At the same time, the truths of science were presented as placeless. A lot of them had been discovered in Italy, but their validity was universal. This latter aspect was not something that the audience needed to be convinced of (despite the reminder offered by the exhibit's title, "Scienza Universale"). What required emphasis was the other half of the proposition: the Italian origins. The exhibition makers worked hard to show that many discoveries had been made in Italy and that science owed essential institutional features to Italian innovations. The rooms with displays on the Middle Ages, for example, presented the rise of universities, starting in Italy, as novel institutions that fostered scientific inquiry through the cultivation and dissemination of knowledge. Important foreign scholars, such as Copernicus and William Harvey, had come to nourish themselves in these environments, whose structure was soon to be copied elsewhere.[40] Hence Italy had provided hubs for scientific exchange as well as the organizational model for such exchanges, all leading to the universal development of science.

In a similar manner, the exhibit suggested the Italian origins of science itself. The first room was dedicated to this birth and located it in the fifth century B.C., on the southern shores of the

[39] The physics subexhibition, for example, replicated Galileo's inclined plane experiments and Röntgen's x-ray experiments. The chemistry exhibit showed Volta's electrolysis and Selmi's colloid identifications—all with instruments made for the occasion. See the plan "Fisica" in the folder "Mostra della Scienza"; the document "Relazione generale per l'ordinamento della Mostra della Scienza," p. 90; and "Lineamenti programmatici per la Mostra della Scienza," pp. 162–164: EUR Exhibit Papers, busta 1011, fasc. 9770, s.fasc. 2, ins. 37.

[40] New plan (untitled; hereafter referred to as "**New plan**"), redacted by Giovanni Gallarati, p. 27, EUR Exhibit Papers, busta 1011, fasc. 9770, s.fasc. 2, ins. 37.

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peninsula, in what Sophocles (in the exhibition planners' translation) had called "L'Italia Illustre." This phrase related to the learned communities that scholars such as Thales and Pythagoras were part of. These were Greek, and the exhibit did not ignore that fact, but the stress lay on the Italian territory rather than the Hellenic culture. It was argued that this environment had spurred the transition to true science. Earlier ancient philosophy had been "fragmented" and "mythological," and it was only "on the banks of the Mediterranean," around Crotone and on Sicily, that something new was born: that "perennially self-renewing attempt of the conquest of Truth, of logic, and of the rational organization of knowledge" that was science as we know it. From there it quickly spread to the rest of the civilized world, but science had "had its cradle in . . . L'Italia Illustre"—as was noted above the entrance door of the start of the exhibit.[41]

This was not a common "origins of science" story, but stories of this kind were on the rise in the historiography of science around this period. While previous historians like George Sarton had insisted that science was a global phenomenon that had been practiced in civilizations everywhere, newcomers like Alexandre Koyré were beginning to argue that, although its method and validity were universal, science had originated in very specific locations (Herbert Butterfield would soon place it along the English Channel).[42] This "birthplace model" was extremely attractive as a narrative for the science exhibit, since it resonated with the EUR's civilizing mission that emphasized Italian origins and universal significance. In fact, the supple combination of Italianness and universality is what made science such a suitable subject for the world's fair in the first place. In principle, it was also possible to claim universal meaning for other cultural productions, but this was much harder in areas such as Italian poetry or folk culture—and hence these were covered in much smaller exhibitions.[43] For science it was a straightforward matter: its universality was seldom questioned. And hence the fascist civilizing mission was ideally expressed in the combination of two of the world's fair's most central exhibitions: "Civiltà Italiana" and "Scienza Universale."

THE NEW ORDER

The world to which the universal exposition was first meant to speak was that of the map enshrined by the Treaty of Versailles. In the meantime, Italy had raised an empire in East Africa and wanted to exhibit its superior civilization to its fellow great powers, especially France, Great Britain, and the United States. As preparations went on, however, the world in which this international posturing was supposed to take place changed beyond all recognition. In barely two years' time, Italy's fellow fascist power, Nazi Germany, would completely redraw the map of Europe. Starting in 1938, it first absorbed Austria and then the Sudetenland, soon to be followed by all of the Czech lands, Poland in 1939, and, in an astonishing series of conquests, Denmark, Norway, the Netherlands, Belgium, Luxemburg, and France—this last with some last-minute Italian assistance. By the summer of 1940, fascism dominated the entire continent. Germany had either conquered its neighbors or established friendly relations with

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[41] *Ibid.*, p. 12; and "Relazione generale per l'ordinamento della Mostra della Scienza" (cit. n. 39), p. 5.

[42] George Sarton, "The New Humanism," *Isis*, 1924, 6:9–42; Sarton, *The Incubation of Western Culture in the Middle East* (Washington, D.C.: Library of Congress, 1950); Alexandre Koyré, *Études galiléennes*, 2 vols. (Paris: Hermann, 1939); and Herbert Butterfield, *The Origins of Modern Science* (New York: Macmillan, 1949), p. 181. In cultural historiography more generally, the birthplace model went back to Jakob Burckhardt's work on the Italian Renaissance.

[43] Science had been a principal exhibition topic from the start. In the very first plan, Berchet stated that *the* vehicle for realizing the world's fair's goals would be "a manifestation . . . where the most recent discoveries of astronomical, electrical, aerodynamic, optical, ballistic, medical science etc. come to be put in particular relief." Berchet, "Progetto di Massima per una Esposizione Universale Romana" (cit. n. 36), p. 4.

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them. The Balkans were soon absorbed as well, and the only enemy left was Britain, itself under frequent attack from the *Luftwaffe*.

By late 1940, it looked as if the E'42 was going to take place in this new, fascist-dominated world. This is not to say that Europe was now ideologically homogeneous (there were still considerable differences between Italian fascism and German National Socialism, especially in the brutality of the latter's anti-Semitism), but in terms of international alliances and power blocs the world's fair faced a very different situation than when the plans had first been formulated in 1935–1937. The Italian government asked for a reassessment, and Cini set out to study the new drawbacks and opportunities. His main conclusion was that there was every reason to continue with the exhibition. The circumstances were, if anything, more favorable to a world's fair.[44] The exposition would be a "work of peace," a celebration of the "more united and just world whose future is being prepared . . . through the victory of the Axis Powers." Fighting would soon come to an end, and out of the war would arise a new world order, a "*nuovo ordine*," that the universal exposition would be the expression of. The Rome World's Fair would herald a "new civilization" that was fascist rather than liberal-capitalist. Emphasizing this shift, Cini proposed adding the Latin phrase "Novus Ordo" to the exhibition's title.[45]

What would be different from the initial expectations was the participation of other countries and their respective roles on the exhibition's world stage. To begin with, there were now many more fascist states, and they "will be able to derive useful teachings from the E.U.R." while demonstrating "how the Mussolinian political-social-economic system has been created not only for Italy, but for the world." But things were different for other countries, especially "England and France, who for centuries had assured themselves of economic, and to a large extent intellectual, dominance in the world" but who now had to cede leadership to Germany and Italy.[46] "Whatever be the body and the physiognomy of the foreign participation, it is certain that *the Exposition will be largely reduced to a great, friendly* [cortese] *competition between the two hegemonic Empires* and that the world will be spectator to that contest." Two fascist nations now dominated the world, and they would likewise dominate the fair and its friendly "Olympics of Civilizations." Cini claimed that his counterpart, the German General Commissioner, had already committed his country to playing that part.[47]

These words sounded triumphant, but there was something halfhearted about the victory—and something ambiguous about the friendly competition with Germany. For the fascist world dominance that Cini celebrated had in fact been achieved almost entirely without Italy's involvement. Hitler had not even informed Mussolini about his invasions, which had so enraged

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[44] "If the Exposition had reason to exist before the war, it will have better reason after it": Vittorio Cini, "Revisione del 'Programma di Massima' del 1937," typescript, sent to Mussolini on 12 Dec. 1940, p. 2. A facsimile of this document has been printed in Gregory and Tartaro, eds., *E42*, pp. 166–170. Similar observations were made by Luigi Federzoni, the president of the Royal Academy, writing for *Civiltà*, a glossy magazine meant to warm up international audiences for the universal exposition. See his "Civiltà," *Civiltà*, Apr. 1940, no. 1, pp. 7–10.

[45] Vittorio Cini, "L'Esposizione di Roma in tempo di guerra," *Civiltà*, Apr. 1941, no. 5, pp. 5–8, on p. 8; and Cini, "Revisione del 'Programma di Massima' del 1937," pp. 6, 5, 1. The Latinization of the German original "*Neuordnung*" was a deliberate Italian appropriation. In a similar move, Cini called quite diverse regimes "fascist," ignoring differences and claiming Italian origins. I follow this terminology for now; more about its strategy below.

[46] Cini, "Revisione del 'Programma di Massima' del 1937," pp. 3, 4, 15. At this point Cini believed that nonfascist states would still participate, speculating that if the war ended soon and the fair was postponed to 1944 these states would adjust their attitudes and accept the new order. Two years later, however, he proposed turning the world's fair into a "Continental" or "Axis" exposition. See Vittorio Cini, "Promemoria per il Duce," typescript, sent to Mussolini on 30 June 1941, p. 3. A facsimile of this document has been printed in Gregory and Tartaro, eds., *E42*, pp. 171–173.

[47] Cini, "Revisione del 'Programma di Massima' del 1937," p. 4 (the italicized portion was originally underlined).

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Il Duce that in October 1940 he decided to occupy Greece without notifying Germany.[48] But that campaign was disastrous. At the moment that Cini was writing about fascist victory, Greek troops were actually pushing the Italian army back, and before long the *Wehrmacht* had to come recue them. On the ground, the "two hegemonic Empires" were far from being equal—and one of them was not hegemonic at all.

How could Italy reassert itself in this situation? On the one hand, fascism was winning; but on the other, Italy had gone from being a major power to being all but eclipsed by Nazi Germany. If the universal exposition was going to proceed and project an image of Italy's place in the world, it had to formulate a response to these developments. The solution that Cini came up with was to claim Italian authorship of the fascist victories. They might have been achieved by German military might, but the visions that had spurred Hitler's advances had originally been conceived in Italy. As a consequence, the world's fair acquired a new function. It would give

> Italy the means to demonstrate before the world the priority of the idea that has generated the new global arrangement. The war that we are fighting is a war of ideas. It is the clash between two opposite conceptions of life, between two worlds, two epochs. From . . . the Exposition must emerge this truth: that the triumph in the present war is principally Italian, because the idea that is confirmed in the war is Italian, namely that of the highest justice between the peoples according to the Mussolinian formula.
>
> There is no doubt about the priority of this conception.
>
> Mussolini first sensed the world war as a revolutionary factor; first intuited the end of the liberal era, foresaw the rise of a new order and confronted the problem of the revision of the treaties [of 1919] that this war is resolving.
>
> It is right [*giusto*] that this primacy should have its solemn consecration in the Rome Exposition. No forum seems more suitable to demonstrate the priority of an idea.[49]

This was a remarkable semantic move. First of all, Cini equated National Socialism with fascism, ignoring ideological differences. Second, by labeling the German conquests as victories for fascism, he placed their intellectual origins squarely in Italy. Hitler may have had the power to execute the great plan, but that plan itself had been conceived and completely foreseen in the mind of Mussolini. The world must know that it owed the new order to Italian civilization—and the universal exposition must spread that message.

Hence the world's fair was given a new propaganda program; but the contents of its various exhibitions could largely stay the same. After all, the main aim in 1937, too, had been to show the superiority of Italian civilization and its spiritual rather than materialistic character. Italy was the originator of ideas that others could share in and apply. It is striking how easily the conception of the civilizing mission, initially formulated for Italy's East African colonies, could be redirected toward Europe. Fascist ideas originated in Italy and could be put into practice—materialized—elsewhere in the world, whether this was Ethiopia, Slovakia, or Germany. As a consequence, Cini proposed only small alterations in the contents of the exhibition program, laying more emphasis on Italy's economic philosophy, among other things, and suggesting that the political claims could now be made more boldly. Whereas before the sensibilities of non-

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[48] Mark Mazower, *Hitler's Empire: Nazi Rule in Occupied Europe* (London: Penguin, 2009), p. 132.

[49] Cini, "Revisione del 'Programma di Massima' del 1937" (cit. n. 44), pp. 2–3.

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fascist states had to be taken into account, in the new order there was no need to beat around the bush: "we will be putting the political aspect in the full spotlight."[50]

No changes were necessary in the science exhibit, either, and Cini emphasized that it should retain its focus on "intellectual manifestations" and that this was of "insuperable importance" for the success of the entire enterprise. At the same time, the associated political message did become bolder in its final execution. For example, the claim as to the Italian origins of science was added to the exhibit in this phase of planning and given particular emphasis. Whereas the planning committee wanted to start the story of science in prehistory, Gallarati, the E'42 executive responsible for securing the exhibitions' message, recommended plunging directly into the birth of full-blown science and making "L'Italia Illustre" the opening theme. Thus Italy's priority would be at center stage, and the exhibit would present "a bold synthesis of the history of scientific thought."[51]

But even if the contents of the science exhibit were not much adjusted, the story they told assumed a wholly different meaning than before, tapping into new ranges of associations. In particular, the motif that Italian scientists had developed ideas that others would later apply—an intellectual priority that had often gone unacknowledged—acquired a new ring with a distinct geopolitical accent. What the exhibit planners had said about chemistry or mechanics now sounded like it could apply to fascism itself: "mankind should know how much the world owes to these and other names [of Italian scientists], which have remained almost ignored in history. And a rigorous, accessible . . . demonstration must bring to light the pretended scientific superiority of [other] people who, instead of creating, have only applied and extended what others have created."[52]

If Cini wanted to showcase the Italian intellectual authorship of others' practical achievements, he hardly needed a stronger formulation than this one. Demonstrating Italian priority had already been a main objective in the science exhibit—it now became the primary goal of the world's fair at large, which could thus draw its rhetoric from "Scienza Universale."

What the science exhibit offered to the universal exposition as a whole was a connection of the new theme of priority to the already existing emphasis on the spiritual/intellectual character of Italian civilization. The link lay in the notion of application. In science, ideas were not just of higher value than machines and contraptions, they could be turned into them—by applying theories and insights to create technologies and artifacts. Ideas preceded their materialization, they had priority over it, and thus the appliers of ideas were indebted to their intellectual authors. While this had already been clear for science and technology, it was now given a political analogue: Italy had authored fascism as an ideology, and others had applied it in the material realization of the new order. In geopolitics as in science, mind preceded hand.

Even as the science exhibit acquired a new significance, however, the target of its messages had changed. In the initial conception, the spiritual character of Italian civilization had been contrasted to the materialism and consumerism of liberal-capitalist bulwarks, especially the United States. If Italy's science was about ideas, theirs was about consumer goods. In the new frame, however, it was Germany that appeared as the antipode. Germany was now the nation that lacked creative genius but had the power and the economic means to apply Italian ideas and turn them into material goods. These industrial technologies and consumer products were often better known by the public at large. In the field of optics, for example, people knew cameras from seeing them displayed in shop windows but were unaware of their intellectual

[50] *Ibid.*, p. 3.
[51] *Ibid.*, p. 13; Gallarati, "Premessa" (cit. n. 13), p. 2; and "New plan," p. 12.
[52] "La Mostra della Scienza Universale" (cit. n. 23), p. 5.

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origins: "the masses feel closer to the industrialist who presents the perfect product, than to the pure scientist; to Zeiss [the manufacturer of cameras lenses] rather than to Galileo [the discoverer of lens systems]." These were the perceptions that the science exhibit sought to change, but the choice of national associations was equally significant: Italian creativity was contrasted to German industrialism. Germany now stood for material wealth and power against the intellectual superiority of Italy. The exhibit would show this: "It is in this function as creator of progress that the genius of our race [the Italians] will appear in all evidence, [a creativity to which other nations] have been drawn, who, enjoying greater means than ours, have built their fortune on our genius."[53]

The official title of this world's fair had always been "The Olympics of Civilizations," signifying the place that Italy wanted to claim *vis-à-vis* the more materialist and individualist cultures of the United States, Britain, and France. But with the 1940 revisions, the competition was no longer primarily with those nations but, rather, with Germany—not so much because the former countries might not participate but, above all, because Italy and Germany were now the leading nations of the world. In his reorientation plan, Cini had signaled this shift, speaking of a "friendly contest" (*cortese competizione*) between two equals. In reality, however, the battle was far from friendly. If Italy wanted to claim any position of leadership in the world, it needed to downplay the stature of its fascist partner and regain culturally the ground that it had lost to Germany militarily. That is what the world's fair and the science exhibit were seeking to accomplish after 1940.

RESEARCH INTERESTS

So far I have examined the Rome World's Fair and the associated science exhibit as they were developed by the chief strategists and planners. But realizing the exhibitions required the collaboration of a wide variety of actors whose views and interests were not always identical to those of the E'42 leadership. Motivations varied, and many scientists cooperated for reasons that had less to do with state propaganda than with their own research priorities. We have already seen that one general incentive for academics to collaborate on the science exhibit was that it would stress the necessity of pure science and hence defend their own work against demands for applied research prompted by the state's autarky policy. But some scientists had very particular reasons for buying into the world's fair program, which had significant potential consequences for their own research. This is illustrated by a remarkable episode in nuclear physics.[54]

Italian nuclear physicists, led by Enrico Fermi, were at the forefront of their field in the mid-1930s, but this position was increasingly hard to sustain. Particle accelerators, and especially cyclotrons, were becoming indispensable for state-of-the-art experimentation, and they were expensive. After 1936 Fermi made several attempts to acquire such an instrument, but even though Italian funding agencies more than doubled his budget and financed the purchase of two linear accelerators, cyclotrons proved beyond their means. In December 1938 Fermi emigrated to the United States, mainly because the new racial laws targeted his Jewish

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[53] *Ibid*., pp. 2 (the original draft had mentioned the Dutchman Van Leeuwenhoek alongside Galileo, but Gallarati crossed his name out), 4.

[54] What follows is largely based on G. Battimelli and I. Gambaro, "Un laboratorio per le alte energie: Alla vigilia della seconda guerra mondiale," in *Atti del XIV e del XV Congresso Nazionale di Storia della Fisica*, ed. Arcangelo Rossi (Lecce: Conte, 1995), pp. 475–487; Battimelli and Gambaro, "Da via Panisperna a Frascati: Gli acceleratori mai realizzati," *Quaderno di Storia della Fisica*, 1997, *1*:319–333; Gambaro, "Acceleratori di particelle e laboratori per le alte energie: Roma e Parigi negli anni Trenta," *Rivista di Storia della Scienza*, 1993, 2nd Ser., *1*:105–154; and E. Amaldi, Battimelli, and M. De Maria, *Da via Panisperna all'America* (Rome: Riuniti, 1997). I thank Giovanni Battimelli and Ivana Gambaro for sending me this literature.

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wife and children but perhaps also in search of better research possibilities, as Ivana Gambaro and Giovanni Battimelli have suggested.[55] Several other nuclear physicists left Italy as well.

Soon afterward, however, the world's fair offered new opportunities. Members of the physics subcommittee were asked for specific ideas for the science exhibit, and two of Fermi's former assistants, Edoardo Amaldi and Gilberto Bernardini, proposed building particle accelerators for the show; they could later be used for research. The Florentine instrument company Officine Galileo started to design two top-level machines that far outstripped those that had been available to Fermi, both in power and in price. It was a long shot, but the E'42 authorities approved the proposals and guaranteed that the accelerators would be paid for. The impossible seemed to be possible after all. What probably stimulated this acceptance was the news that Britain, France, and Germany were also building cyclotrons, which were quickly becoming prestige objects in the "Olympics of Civilizations." Planning thus continued: Amaldi made a cyclotron tour of the United States to gather information on designs, and the Officine Galileo elaborated the details. Suddenly, however, Cini made it clear that he expected the firm to pay for these "masterpieces of technical construction" out of its own pocket.[56] Such industry donations to expositions were not unusual, as the next section will show, but this was not the financial arrangement that the instrument makers had had in mind. Protests followed, but Cini stood firm, and the accelerator gradually disappeared from the exhibition plans after 1940.

The dream had lasted barely a year, and in hindsight it all seemed too good to be true. After the war Amaldi declared that he had never really believed in the E'42 "vanity fair" and insisted that nuclear physics had only suffered from fascist policies: "forces and circumstances completely alien to our field of action."[57] But for a while it had seemed that those alien forces might actually boost the field, and the hoopla surrounding the world's fair had never so affronted Amaldi that he would forgo the opportunities that it offered. In fact, after the war he picked up the same plan and tried to revive it in a series of attempts that finally resulted in the installation of a national cyclotron in Frascati and a European one at CERN. Amaldi's initiatives had not much affected the science exhibit, but the E'42 would, indirectly, affect the development of research in Italy. In a few instances, then, the world's fair and scientific practice became enmeshed.

INDUSTRIAL OPPOSITION

Scientists had their own agendas, but so did other actors on whose cooperation the world's fair depended. Views varied even in the higher echelons of the fascist establishment. The fascist state was not as uniform as its public presentations would suggest, and under the surface of concord and flawless efficiency lingered diverse groups and factions with diverging interests.[58]

One of these groups, and a very powerful one, was Italian industry, collectively organized—as a part of the corporatist state—in the Fascist Confederation of Industrialists (Confederazione Fascista degli Industriali). These were Italy's money makers, and most of them (companies like FIAT, Breda, and Borsalino) were concentrated in the northwest of the country, in Piedmont and Lombardy. The Italian industrialists had always had a great interest in world's fairs, and

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[55] Battimelli and Gambaro, "Da via Panisperna a Frascati," p. 323.

[56] For the approval see Battimelli and Gambaro, "Un laboratorio per le alte energie" (cit. n. 54), p. 480; for Cini's new requirement see Cini to A. Gaggia of the Officine Galileo, 11 Sept. 1939, quoted in Battimelli and Gambaro, "Da via Panisperna a Frascati," p. 324.

[57] Amaldi *et al.*, *Da via Panisperna all'America* (cit. n. 54), p. 17. Amaldi's memoir is reproduced in this book.

[58] On the fascist myth of flawless organization as a cover-up for diverse and diverging interests see Emilio Gentile, *Fascismo: Storia e interpretazione* (Rome: Laterza, 2002), Ch. 7.

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they were used to presenting themselves at such events with their latest products. At the New York exposition of 1939, for example, one of the main attractions in the Italian pavilion had been the "Hall of Industry," showcasing Italy's newest innovations in electrical apparatus, airplanes, textiles, food processing, and the like. They anticipated similar participation at the E'42, and they had already advertised themselves lavishly in *Civiltà*, the glossy magazine aimed at prospective fair visitors at home and abroad. The Fascist Confederation of Industrialists especially committed itself to the science exhibit, pledging in 1939 to donate 30 million lira to finance the entire construction of the Palazzo that would accommodate the exhibition.[59] (See Figure 3.)

But what the industrialists expected of the science exhibit was quite different from what the exhibition planners had in mind. While the latter chose to shift attention away from industrial applications, focusing visitors' attention on the ideas behind them and the primacy of scientific thought, the former wanted the exhibition to be about "the achievements of science applied to industry," and they hoped that the permanent museum that would arise from the E'42 exhibit would be a "Museum of Industry," not of scientific ideas. Similarly, while its planners wanted the science exhibit to be different from what was on display at foreign science museums, such as the Deutsches Museum and the Palais de la Découverte, the fascist industrialists wanted the exhibition, and the museum that would result from it, to be just like those institutions—so that Italy would be on a par with "the greatest industrial states."[60]

Vittorio Cini therefore had a problem. He needed the industrialists' financial support to realize the science exhibit (and in his correspondence with them he regularly noted that "we are in dire need of cash").[61] But he could not deliver what they wanted, since this would run entirely counter to the strategic aims of that exhibit and the world's fair as a whole. A focus on industrial products might promote Italian commercial enterprises, but it would never allow the country to claim world leadership—surely Germany would completely outdo Italy in any display of industrial strength, as would the United States, Japan, France, and Britain. If the fascist state wanted to step out of their shadows, it should focus attention on the immaterial: ideas, intellectual power, creative genius, spiritual strength. The industrialists were happy to present Italy as one among several (and several greater) industrial states. But the fascist policy makers needed to project a much more ambitious picture of their nation: as the world's leading source of civilization.

In the main, Cini managed this problem by ignoring it, and he was quite successful in doing so. He generally kept the industrialists in the dark about the direction in which the plans were developing. He made ambiguous promises that the science exhibit might turn into an "Industrial Museum" after the fair was over, switching back and forth between the terms "science" and "industry." And he named one engineer to an exhibition subcommittee that subsequently never met—so that he could feign openness while not giving anything away. Meanwhile, requests for industrial exposure kept coming. In 1939, the director of the Fascist Confederation of Industrialists, Giovanni Balella, asserted that the "hydrothermal industries" should be included in the treatment of hygiene at the exhibit. Cini replied that the planning committee had studied this option but concluded that this was not the right place to showcase "medicinal cures and mineral waters." A little bit later, FIAT's public relations officer, Gino

[59] This commitment was finalized in 1940, when periodic payments started to come in. See note to *Il Duce* and Mussolini's approval, 23 July 1940, EUR Exhibit Papers, busta 1008, fasc. 9770, s.fasc. 2, ins. 2/N. Regarding the industrialists' New York display see the brochure *Italy's World Fair: New York 1939*, EUR Exhibit Papers, busta 1012, fasc. 10866.

[60] Statement by Giuseppe Volpi, president of the Fascist Confederation of Industrialists, 12 July 1939, EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38.

[61] See, e.g., Cini to Giovanni Balella, 7 July 1942, EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38.

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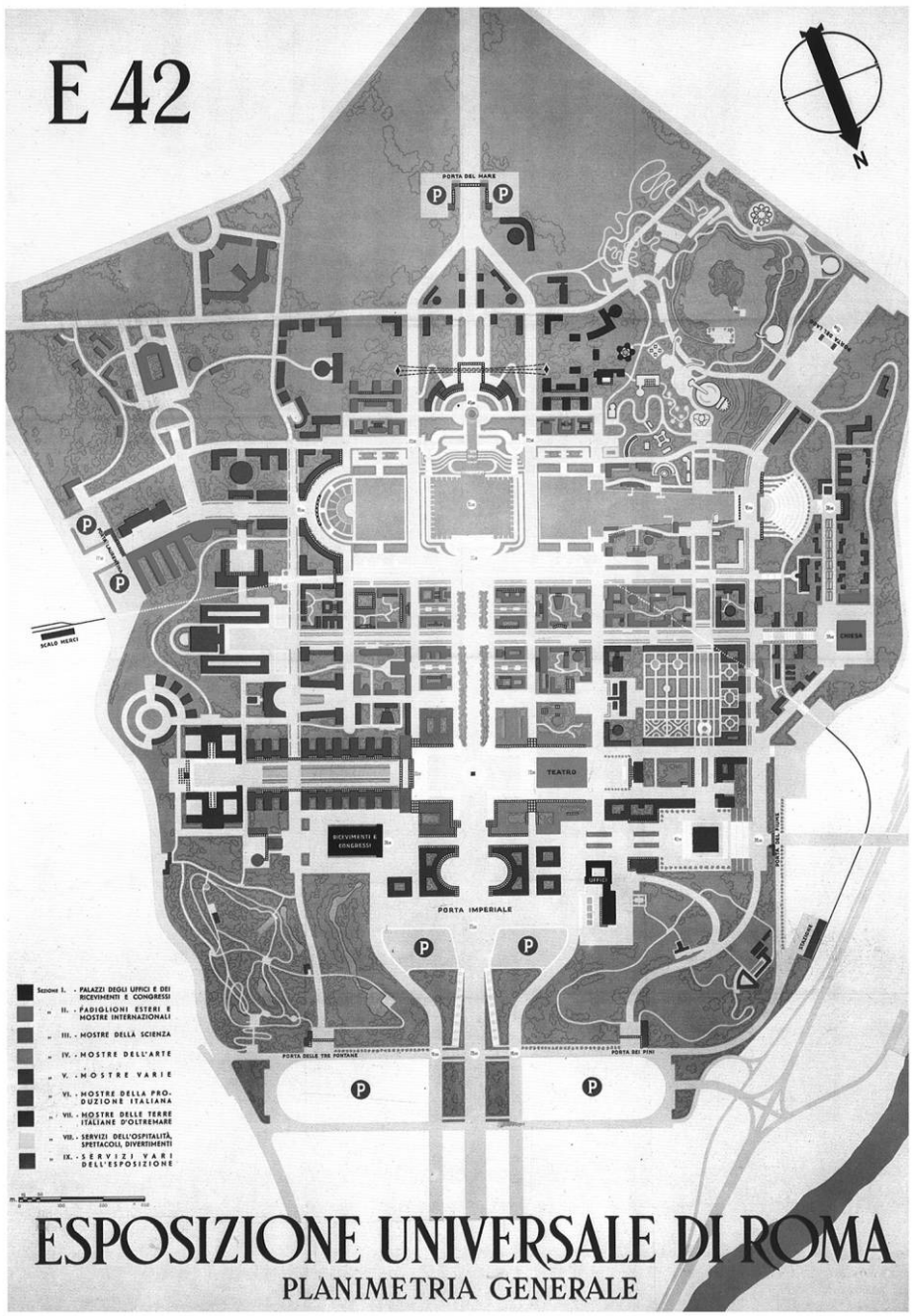

Figure 3. Map of the E'42 exhibition grounds as envisioned in 1939. The science exhibit was to occupy the buildings in the upper left and lower left corners of the central square with the obelisk in the middle.

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Pestelli, visited Cini to ask for inclusion of the car manufacturer at the exhibit. In this case, too, Cini managed to decline the request. At the same time, however, he felt that something had to be done to divert the industrialists' intrusions. Perhaps "an artistic allegory or something like that" could be added to the science building, showing the greatness of Italian industry and the generosity of industrialists' support. He hoped that would satisfy their thirst for the limelight, because, contrary to what they believed, there was going to be no place for their products at the science exhibit.[62]

Cini held out for a long time, but in the summer of 1942 his double-dealing collapsed. Right at the moment that the science Palazzo was being finished and the last marble slabs were being placed inside, confederation director Balella learned that the exhibition might not be what the industrialists expected. The reason was that a Milanese engineer, Guido Ucelli, was busy creating a polytechnic school and an industry museum in Milan with the blessings of the fascist government. Both Cini and Mussolini himself had repeatedly assured Ucelli that his industry museum would in no way overlap with anything that was planned for the science exhibit at the world's fair. But now that he had gotten wind of it, Balella asked Cini why there was no overlap, given that the science exhibit was also going to showcase industrial applications. And if there was no overlap, he insisted, then there certainly should be—because what else were the united Italian industries putting their 30 million lira into? Balella claimed that the exhibition had already "not met with excessive favor on the part of Lombardy's industrialists," who would have preferred to have their show in Milan in the first place. But now that the Rome exhibit was "different in nature, scope, and aims" than Ucelli's industry museum, as Cini himself had declared, Balella no longer knew how to convince the great industries that they were making a good investment.[63]

Cini tried to defend himself, but it was to no avail. In August 1942 Balella announced that the industrialists would suspend their support unless they received a satisfactory explanation. The E'42 planners tried to respond, but it only became clearer that there was a deep division of insights and a direct clash of interests. The conflict finally led to a standoff at the Ministry of National Education, where the minister called both parties together and made the final decision as to the way forward.[64] And that decision was that the science exhibit should proceed according to its original plan and that the Fascist Confederation of Industrialists should finance

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[62] For the appointment of an engineer to the subcommittee that never met see "Corrispondenza fra L'Ecc. il Sen. Cini e L'Ing. Ucelli," p. 2, EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38. Regarding the claim on behalf of the hydrothermal industries see Balella to the Minister of Corporations, 24 Sept. 1939; and Cini to Fascist Confederation of Industrialists, 6 Feb. 1940: EUR Exhibit Papers, busta 1015, fasc. 9770, s.fasc. 6, ins. 2/F. For the suggestion about adding an "artistic allegory" see Cini to Giancarlo Camerana, 29 Sept. 1939, EUR Exhibit Papers, busta 1007, fasc. 9770, s.fasc. 2, ins. 2/B.

[63] Balella to Cini, 2 July 1942; and Cini to Balella, 7 July 1942: EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38. What had tipped Balella off was a series of newspaper articles announcing the establishment of Ucelli's Industry Museum in Milan, as well as a meeting with Bottai, who seemed to support the initiative. For Cini's and Mussolini's declarations that Ucelli's museum and the E'42 exhibit had "different characters" see Ucelli to Cini, 17 July 1937; Ucelli to Cini, 12 Oct. 1939; and Cini to Ucelli, 14 Oct. 1939: EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38. Ucelli had already spotted the deception, as a certain "Commissario Barzetti" had asked him to keep quiet about his industrial museum in the light of the science exhibit at the world's fair and the industrialists' sponsorship of the latter. On the competition between the Milanese and Roman plans see Canadelli, "I musei scientifici" (cit. n. 8), pp. 885–887; and Elena Canadelli, "Le macchine dell"ingegnere umanista': Il progetto museale di Guido Ucelli tra Fascismo en Dopoguerra," *Physis*, 2017, *60*:93–104, esp. p. 97.

[64] Balella to Cini, 14 July 1942, Cini to Balella, 23 July 1942, and Balella to Cini, 19 Aug. 1942: EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38; S. Innocenti to the Fascist Confederation of Industrialists, 27 Aug. 1942, EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38; and Ministro Educazione Nazionale to Cini, telegram, 20 Jan. 1943, EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38.

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an exposition about scientific thought and Italian intellectual leadership in the world of science.[65] The E'42 faction won; the industrialists were overruled.

The question is why. Why did the "spiritual" conception of the science exhibit prevail? How was it that Italian industry, with all its financial power and the entire tradition of world's fairs on its side, lost out to an academic focus on ideas and on science as an intellectual pursuit? One explanation is that the Minister of National Education was no neutral arbiter. For that minister was Giuseppe Bottai, who had himself initiated the plans for the universal exposition and formulated the vision that guided it. But another reason is that, however great the financial power of the industrial interests might be, it was up against an even more formidable interest: that of foreign policy. The universal exposition dealt with Italy's place in the world, and there was no way the country could claim leadership if it was going to focus attention on industrial production. In the fascists' worldview, and certainly in the new order prevailing after late 1940, Italy should not claim to be on a par with Germany, Britain, and France; it should stand above them. And such a claim could only be made by highlighting the immaterial: civilization, creative ideas, scientific thought. In the final analysis, this projection of soft power, this foreign policy aim, was of even greater importance to the Italian state than serving its industrial, economic interests.

CONCLUSION

With this review of various strategic moves and conflicts surrounding the science exhibit, its character as a specimen of scientific internationalism has perhaps somewhat faded into the background. But it is fruitful to keep that identity in mind, not only because of the explicit reference in its title ("Scienza Universale") but also because of actors' repeated insistence on its internationalist nature. According to Cini, industrial museums had a national character, while displays of science were "of international and universal scope."[66] They projected visions of universal civilization and of Italy's relations with the rest of the world. It may therefore be fruitful to consider what light the E'42 science exhibit throws on scientific internationalism in the 1930s and 1940s.

A first conclusion could be that scientific internationalism was clearly not a monopoly of the left—liberal or socialist—and that it was far from apolitical. Its expression at the EUR was emphatically political, and the goals of its expression were those of fascist Italy. Moreover, projecting images of universal science was not merely stating a belief. It was an intervention for propaganda purposes, meant to do political work. Scientific internationalism was an instrument of foreign policy.

A second conclusion should be that the internationalism of the science exhibit came with a map. The E'42 display of universal science implied a specific vision of the world order—initially that of the post-Versailles balance of power of competing world empires, with imperial Italy claiming its place; later that of the "*nuovo ordine*" of continental fascist hegemony, with Italy as its intellectual author. Universalism was not shapeless. It had a particular texture in the form of a hierarchy of nations and a vision of the type of building blocks that made up the world as a

[65] The next months saw the start of the execution of the plans that Cini *et al*. had submitted to the meeting. See "Appunti per la Riunione col Ministro Bottai in Merito alla 'Mostra della Scienza' all'E.U.R. e al 'Museo Nazionale della Tecnica' in Milano," "La 'Mostra della Scienza' all'E.U.R. e il 'Museo Nazionale della Tecnica' di Milano," and "Corrispondenza fra L'Ecc. il Sen. Cini e L'Ing. Ucelli": EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38. An Executive Committee was appointed in April 1943: see "New plan"; and "Comitato Esecutivo Mostra Scienza" (cit. n. 11). The industrialists may have given in in part because it was simply too late to turn back the clock. They had already donated more than the promised 30 million lira, and this money had already been spent on the exhibit, following the original plan.

[66] Cini to Balella, 7 July 1942, EUR Exhibit Papers, busta 1011, fasc. 970, s.fasc. 2, ins. 38.

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whole. In the fascist vision these blocks were strong national imperialist states—those were the units that produced universal science, and their success in doing so reflected their hierarchical position. Other internationalisms cast this differently. In the contemporary view of H. G. Wells, for example, science advanced irrespective of nationality and effectively erased national borders. His world order consisted of a single building block.[67]

The science exhibit also sheds light on Italian fascism. A common characterization of fascism is as "ultranationalism," and there is little in what we have seen here that challenges that label. But the E'42 makes it clear that fascism *also* constituted an internationalism—a view of the universality of its culture and a view of relations between states.[68] In the science exhibit the two were almost inseparably interwoven: nationalism and internationalism constituted each other. Fascism has also long been characterized as anti-intellectual and as imposing ideology on science.[69] In the case of Nazi Germany, historians have found a complicated landscape of such ideological impositions on the contents of knowledge (or the lack thereof).[70] But the Italian case shows another kind of relation of science to fascism. Here ideology was not imposed on science; rather, science served to build ideology. A political propaganda campaign was furnished out of representations of scientific progress and discovery that were widespread and fairly commonplace—even the nationalist biases were not uncommon in other countries. This helps explain why the story of the exhibit—the discoveries, the major developments, the cast of characters—seems quite conventional, even to nonfascists at the time and to historians today. But the message it conveyed was anything but standard. At the E'42, the progress of science and the universality of knowledge were displayed for distinct ideological purposes: to celebrate, defend, and advance the superiority and the hegemony of the Italian fascist state.

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[67] Wells expressed these views in numerous books—from *Anticipations* (1902) to *The Shape of Things to Come* (1933)—envisaging a future where the world was governed scientifically and national borders had vanished.

[68] Roger Griffin, *The Nature of Fascism* (London: Routledge, 1993). On other manifestations of Italian fascist internationalism see Ledeen, *Universal Fascism* (cit. n. 7); and Martin, *Nazi-Fascist New Order for European Culture* (cit. n. 7).

[69] The seminal statement is Robert K. Merton, "A Note on Science and Democracy," *Journal of Legal and Political Sociology*, 1942, *1*:115–126.

[70] Examples of ideological imposition long dominated historiography of "science under Hitler," starting already during World War II. The more complex picture is a result of later revisionist writing, which by now is too numerous to sum up. Seminal was Robert N. Proctor, *The Nazi War on Cancer* (Princeton, N.J.: Princeton Univ. Press, 1999). Margit Szöllösi-Janze surveyed the historiographical change in "National Socialism and the Sciences: Reflections, Conclusions, and Historical Perspectives," in *Science in the Third Reich*, ed. Szöllösi-Janze (Oxford: Berg, 2001), pp. 1–36.

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