



Expo '58



Nucleus for a New Europe

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EXPO '58 IN BRUSSELS, the first postwar world's fair, showcased the peaceful atom and underscored the Cold War confrontation between the United States and the USSR, whose pavilions squared off against one another in the fair's international section. The Atomium, Expo '58's centerpiece and an Eiffel Tower for the atomic age, rescaled a stick and ball model of an iron crystal to Brobdingnagian proportion, 165 billion times actual size. Standing 335 feet at its highest point, Atomium's nine steel "atoms," 60 feet in diameter and interconnected by 10-foot-diameter tubes, provided a striking focal point for the fair (fig. 1.1). Designed by Belgian engineer André Waterkeyn in collaboration with the architects André and Jean Polak, the Atomium was intended, like Gustav Eiffel's tower before it, to demonstrate the host country's technological prowess, and to come down as quickly as it went up. Instead, like its predecessor, it became an enduring symbol of the technological aspirations of its era and a reminder of futures past. Given its official motto, "Atom = Hope," the Atomium's exhibits predictably highlighted the utopian promise of atomic energy, as did the national exhibits of many of the fair's participants, including the United States, the USSR, Great Britain, France, and Belgium.¹ The organizers actually considered powering the fair with a nuclear reactor, then prudently decided not to install



Fig. 1.1. Visitors heading to the Atomium on April 17, 1958, the fair's opening day. *Source:* Archives of the City of Brussels, A-3958 Exposition Universelle de Bruxelles (Atomium), © 2018—www.atomium.be—SOFAM Belgium.

an experimental reactor in the middle of a crowded international exposition and instead set it up in Belgium's nuclear research center in Mol.² The Atomium had to settle for a photo display of the Mol facility, which would not be operational until 1962.

Atoms for Peace has overshadowed Expo '58's promotion of post-Second World War European integration, and the institutions, such as the European Coal and Steel Community (ECSC) and Euratom, founded to foster it. European collaboration was, however, a prominent theme at the exposition, in both explicit and more subtle ways. From the top of the Atomium, a thoughtful visitor might have noticed how the fair itself provided a kind of road map for that vision. To one side of the Atomium stretched the Belgium section, nearly half the fair, featuring pavilions devoted to metallurgy, petroleum, chemistry, and hydroelectric power, a new world of science-intensive industries deliberately juxtaposed with the nostalgic "Joyful Belgium" folklife exhibit. The Belgian section provided a showplace for a rising generation of Belgian architects who had already drawn up plans for a modernized Brussels. American multinationals such as IBM and Kodak, seeking to build their European brands, put their pavilions there rather than in the international section.³ On the other side the Atomium overlooked the section on Belgium's colonies, the Congo and Ruanda-Urundi, which almost completely ignored the recent calls for independence and instead continued Belgium's pre-Second World War tradition of presenting its colonial project in terms of a "civilizing mission." The mining pavilion, in stark contrast to the "native village" nearby, featured a mashup of midcentury modernism and traditional African architecture and paid tribute, almost literally, to Belgium's trump card in the high-stakes game of nuclear diplomacy, its uranium mines in Katanga, the richest in the world.⁴

Beyond the Congo a visitor in the Atomium could see the Porte Mondiale opening to the section of international organizations and so catch a glimpse of a future more enticing and less threatening than the Cold War being played out along the Avenue of Nations. Consistent with the organizers' intention to promote a "new humanism" committed to world peace and supranational cooperation, an entire section of the fair had been allotted to international organizations.⁵ This included exhibitions by the Red Cross, which had also participated in earlier world's fairs, and the United Nations. But the section was dominated by newly created European institutions such as the Council of Europe, the Benelux, and the European Coal and Steel Community (ECSC), all with particular relevance for a host country and city whose long-standing commitments to attracting international events and organizations had acquired a more narrowly European focus in the postwar context.⁶

Like all world's fairs, Expo '58 aimed to put its host country on the map, to promote city building, and to project an image of modernity. Expo '58 did

all that, and gave an enormous boost to rebuilding postwar Brussels, including new ring roads, a modern airport terminal, urban skyscrapers, and a complex of administrative headquarters for a burgeoning federal bureaucracy.⁷ At the same time Expo '58 offered a compelling brief on behalf of Brussels' bold bid to become the capital city of "Little Europe" and the right site for the headquarters of supranational organizations such as Euratom, the ECSC, and the European Economic Community (EEC) meant to strengthen a continent tired of war in strategic sectors.

EUROPEAN COAL AND STEEL COMMUNITY

The ECSC Pavilion, by the Belgian modernist architects E. Delatte and R. Maquestiau and their French colleague A. I. Crivelli, had the form of a masted "steel construction hung from six 98-ft. high portal frames, covering a total area of 80,000 square feet"⁸ (fig. 1.2). Its slogan, "Building Europe is the path to peace and prosperity," said it best, with one triangular beam for each of the founding member states: France, Belgium, West Germany, Italy, the Netherlands, and Luxembourg.⁹ Although the ECSC had been unable to live up to several of its founding objectives—most notably the goal of Jean Monnet and several others who had shaped the ECSC treaty, including the US government, of using the ECSC as a tool for suppressing cartels¹⁰—the displays inside its pavilion presented visitors with often unqualified stories of progress.¹¹ Several of the promotional narratives, communicated in six different languages, documented technical changes and research and development (R&D) activities undertaken in the coal and steel industries. Supporting R&D was, indeed, one of the areas where the ECSC had broken new ground, although the funds that it distributed went mostly to projects that involved limited transnational collaboration.¹² The ECSC also put substantial emphasis on its lesser known mission of improving the working conditions and "standards of living" of miners and steel workers. Visitors could, in fact, get a romanticized sense of what these labor conditions were like by descending into the deepest place on the entire exhibition grounds: the "model coal mine" located underneath the ECSC Pavilion.¹³

The ECSC Pavilion provided a public face for an otherwise low-key and strongly technocratic organization.¹⁴ The fact that the ECSC engaged in such visible public relations efforts owed much to Monnet, whose experiences in the United States are said to have convinced him of the importance of creating an Information Service. Instead of just describing the ECSC's activities, Monnet wanted to use the service to "educate" Europeans on the value of transnational integration.¹⁵ In this respect participating in Expo '58 made it possible to "reach a large number of people, often from the least informed sections of public opinion."¹⁶ To promote its activities, as well as to legitimize supranational European integration, the ECSC relied on several of the same narratives and media formats



Fig. 1.2. The European Coal and Steel Community Pavilion, a symbol of West European integration. *Source:* National Archives of Belgium, Expo 58 - n° 9034.

that it had been using in the years before the world's fair. The idea that European collaboration was necessary for ensuring both peace and prosperity—two objectives that had long been considered closely related¹⁷—had been the single most important argument used by advocates of European integration up to this point.¹⁸ At the fair this standpoint was prominently on display in the entrance hall of the ECSC Pavilion, while also being presented in carefully prepared speeches of the type that ECSC officials had started using as part of their efforts to reach broader audiences.¹⁹

In addition the ECSC used Eurovision, the transnational broadcasting network established in 1954, to simultaneously televise a “What do you know about Europe?” quiz on the six ECSC member states. The final round of the quiz, which tested the relevant political, economic and geographical knowledge of a candidate from each ECSC member state, was one of various events organized on May 9, 1958, the fair's “Europe day.”²⁰ As suggested by the selection of this date, meant to commemorate the seminal declaration that the French foreign minister Robert Schuman had made eight years earlier, the exposition sought to heighten awareness of various newly created symbols of European integration. The band of a large Dutch coal mine performed the composer Michel Roverti's “Hymn of

the United States of Europe” in the fair’s Grand Auditorium, thirteen years before Beethoven’s “Ode to Joy” became the official European anthem.²¹ Likewise, as the *Bulletin from the European Community of Steel and Coal* noted in an article on the May 9 festivities: “Philatelists from many countries took the opportunity to have their letters, which bore special European stamps, franked with a [European] Community postmark celebrating the anniversary.”²²

Once the costs of the ECSC’s participation in the fair became clear, however, the press did not maintain the generally positive tone that had characterized its initial coverage. Dutch newspapers were particularly vocal in their criticisms of the “disgusting waste of money” that they saw documented in budget reports by Urbain Vaes, a Belgian economist and accountant who would become notorious among early eurocrats for his scrutiny of their expenses. Vaes’s reports revealed that the total sum spent by the ECSC for the fair had come close to 95 million Belgian francs, including architectural fees paid for never-implemented plans to reconvert the ECSC Pavilion into a conference center after the end of the exhibition.²³ Less controversial but perhaps more consequential, the fair had also exhausted a large portion of the European institutions’ public relations budgets. In this respect it may have contributed to the reorientation toward the more elite-directed information dissemination approach that the community would adopt early in the next decade.²⁴

EURATOM

Expo ’58 would have been the perfect debut for Euratom had the timing been better. The Treaty of Rome, which established both the European Atomic Energy Commission (Euratom) and the European Economic Community (Common Market), had been signed by the six founding members of the ECSC in the spring of 1957 and officially launched the following January, far too late for anyone to organize a Euratom pavilion. Jean Monnet, a stalwart supporter of a United States of Europe, considered Euratom “the spearhead for the unification of Europe” because its limited aims required fewer political compromises than integration through a common market or a defense community.²⁵ Moreover, Euratom had strong backing from the US president Eisenhower, who despite opposition from his own Atomic Energy Commission saw Euratom as an exemplar of his Atoms for Peace initiative.²⁶ In November 1958, three weeks after the close of Expo ’58, Euratom (already in temporary headquarters in Brussels) and the United States would sign an “agreement of cooperation” providing loans, enriched uranium, and scientific and technical assistance through Euratom rather than on the conventional US model of bilateral agreements with its individual members.

Expo ’58’s exhibits on the peaceful atom hinted at the tension between col-

laboration and nuclear nationalism that would ultimately hobble Euratom. Each country insisted on showcasing its own nuclear program. The Atomium, the most visible symbol of “*énergie nucléaire*” at Expo '58, included space in four of its nine spheres for nuclear exhibits, though the United States and the USSR decided to put their displays in their respective national pavilions. So “visitors to the Atomium were treated to exhibitions about Europe, European industry, and the wonders of atomic energy.” The British and French displayed competing models of designs for new nuclear power stations; Italy highlighted the contributions of its *Comitato Nazionale per le Ricerche Nucleari*; Germany wanted visitors to appreciate “German steel in the service of nuclear technology”; while Belgium reminded everyone that the uranium to power these future reactors would be coming from Congolese mines.²⁷ The International Palace of Science included a small working reactor. Still, the clear message of the exposition was that national goals trumped supranational cooperation. The Atomium’s nuclear exhibits would nonetheless be so popular that updated versions would still be there a decade later.

Where the ECSC sought to provide a political and economic check on Germany, and to rationalize and modernize an older energy regime, Euratom prepared for what everyone assumed would be the next one. Europe’s energy independence, threatened by shortages of coal at home and by uncertain access to petroleum supplies abroad, had been given new urgency by the Suez Crisis of 1956. Nuclear power could free Europe from its dependence on imported oil from the Middle East and foster a new era of economic prosperity once prices for nuclear plants could be brought into line with coal, oil, and gas-fired power stations. As intended by the Americans, Euratom would also open up European markets to companies such as General Electric and Westinghouse and help the United States demonstrate a commitment to a nuclear-powered Europe before the USSR had the opportunity to do so.²⁸

A decade after its founding, Euratom’s own president conceded that it had been “a disappointing, apparently sterile but very promising experiment.”²⁹ Certainly it would not come close to meeting its milestones for electric power generation until after the oil crises of the 1970s, or to reining in France’s independent nuclear weapons programs.³⁰ Euratom did accomplish one of Belgium’s primary goals, transforming the country from a supplier of nuclear raw materials into a nuclear broker within the European community. Euratom supported four major research centers, including the Central Nuclear Measurements Bureau in Geel, Belgium, and helped fund a series of research reactors at Mol—the BR2 and BR3—that despite some early setbacks, put Belgium on the path to ‘nuclearity.’ Belgium’s nuclear power plants eventually provided half of the electricity for the country’s grid, more than any Euratom member except for France.³¹

REBUILDING BRUSSELS

At a different level, the world's fair and the comprehensive infrastructure projects associated with it represented an important part of the Belgian government's efforts to achieve its goal of establishing Brussels as the capital of "Little Europe" by locating the headquarters of two newly established institutions, the EEC and Euratom, there. Ironically, it had been the Belgian foreign minister Paul Van Zeeland who, in the summer of 1952, had vetoed the proposal of the other member states to base the ECSC in Brussels. Van Zeeland had done this because the government of Prime Minister Jean van Houtte, a Christian Democrat, had committed itself to defending the candidacy of Liège, the provincial mining center located close to both Germany and the Netherlands.

Once it had become clear that the idea of centralizing different institutions in a single city seemed to enjoy more political support, the next government tried to revive the candidacy of Brussels. In 1958, for example, it published a lavishly illustrated, multilingual white paper highlighting the Belgian capital's strengths and predicting that its population would rapidly expand up to a size of approximately 2 million people—a number that would effectively have made Brussels one of Europe's largest cities.³² Consistent with a long tradition of presenting Belgium as a crossroads of different cultures, as well as with the world's fair's emphasis on international collaboration, the white paper also showcased Brussels as a "mini Europe" and presented the Heysel Park exhibit site as one of several possible locations where a new European district could be constructed.³³ Understandably, the appeal of the Heysel site partly stemmed from the hope to, as one journalist put it, "install Europe" in buildings that would be rendered vacant after the completion of the fair.³⁴

Expo '58's emphasis on European collaboration could not entirely mask the tensions underlying the competition to host the proposed European capital. As the *Times* of London explained: "There is no doubt that, in spite of all the lip-service paid to the idea of a common European outlook, this question of which country is to enjoy the prestige and commercial advantages of housing the new organizations and their extensive staffs is giving rise to any amount of old-fashioned national rivalry."³⁵

Government officials and city planners did not, however, await the outcome of the European capital competition before starting to modernize Brussels. Minister of Public Works Omer Vanaudenhove took full advantage of the visibility and prestige of an international exposition to bulldoze through political roadblocks that would otherwise have delayed major infrastructure and public building projects. The fair's organizers chose Heysel Park, site of the 1935 World's Fair site, for Expo '58. Vanaudenhove's engineers constructed an interconnected highway system of expressways, ring roads, viaducts, tunnels, bridges,

and parking structures (most famously Parking “58”) that made the exposition grounds accessible by car, and fundamentally transformed the city itself. If the official Objectif 58 of “continuous traffic flow in Brussels” never quite lived up to its name, the road-building projects increased the city’s traffic volume by half, with surprisingly little local opposition from a population still infatuated with highways and automobiles as symbols of urban modernity.³⁶

Meanwhile a group of prominent Belgian architects leveraged their experience planning administrative complexes for the government into commissions at Expo ’58, and then used the popularity and political connections gained from the world’s fair projects to win subsequent government contracts.³⁷ In the run-up to Expo ’58 Brussels had already committed itself to rebuilding itself as a “great modern city” with International Style office buildings for government agencies, banks, corporate headquarters, and supranational organizations such as Euratom and the EEC.³⁸ Maxime Brunfaut’s Sabena Air Terminus downtown and his striking Aéroport 58 terminal for the new national airport at Zaventem, gave a local accent to Belgium’s jet set modernism.³⁹ Maurice Houyoux’s designs for the colonial section and Bendrickx-van den Bosch’s Belgium Square at Expo ’58 offered a retro-modernism that easily translated into their civic buildings. The architects responsible for the design of Cité administrative de l’État, to house the agencies of Belgium’s mushrooming state bureaucracy, had all worked on projects at Expo ’58 before completing the massive complex.⁴⁰

More radical was the Cité Modèle by Fernand Brunfaut (Maxime’s brother), a planned community to be colocated with Expo ’58 that fell behind schedule so that Expo ’58 visitors could view only the model. Cité Modèle, partially completed afterward, with just eight high-rise apartment buildings, may have fallen short of its architect’s socialist aspirations for worker housing, but it still stands, expanded and enhanced, as an important urban planning legacy of Expo ’58, much like Moshe Safdie’s Habitat 67 for Montreal’s world’s fair a decade later.⁴¹

THE “HARD SELL” VERSUS THE “SOFT PITCH”

Expo ’58’s organizers could hardly ignore the Cold War, though they encouraged the two superpowers to downplay military and geopolitical rivalry in favor of scientific, economic, and cultural competition.⁴² To heighten the drama, fair officials offered the United States and the USSR two of the largest and choicest sites on the fairgrounds, flanking one another in the international section. The Belgium authorities made no secret of their expectation that the pavilions would face off as “competing images of modernity and the good life,” and as “a site of struggle between the ideas of two worlds, capitalist and socialist,” all played out on the international stage.⁴³

Nothing so clearly distinguished the Soviet from the American approach to Expo ’58 as their respective choices for commissioner general of their pavil-

ions. The Soviets selected a former minister of the machine tool industry while the Americans went with a former Broadway producer.⁴⁴ No wonder the Soviet exhibits had the look of a conventional trade fair while the US exhibits came across as a fashion show. Even one Soviet critic complained, “A major part of the hall is dedicated to showing powerful Soviet machine tools, turbines, and six models depict heavy industrial plant in action . . . the person who benefits from this blessing recedes, once again, into the background.”⁴⁵ In a lucky break the exhibit designers could not have anticipated, the “sensational flight of Sputnik” in 1957 gave the Soviet Pavilion what the industrial and consumer displays never could, a signature attraction with “out of this world” allure. Facsimiles of Sputnik I and II brought in the crowds and brought home the message about socialist modernity. Sputnik overshadowed even the best of the Soviet atomic displays, including a model of an industrial nuclear reactor and toy-size *Lenin*, a nuclear-powered icebreaker strikingly illuminated by the faux northern lights.⁴⁶

Caught flat-footed by Sputnik, the United States had to concede the space race to the Soviets for the moment and highlight other American accomplishments. Eschewing what they considered the Soviet “hard sell,” the US exhibit designers decided that, “The best way to sell America is the ‘soft pitch.’”⁴⁷ To design an appropriate showroom for the American way of life, the State Department officials responsible for the pavilion turned to architect Edward Durell Stone, who had just completed final plans for the US embassy in India, perhaps his most stunning commission to date. As he had done in New Delhi, Stone looked to classical models for inspiration in Brussels, and settled on the Roman Coliseum as an ideal expression of imperial power and public spectacle. Given the irregular site he had to work with, a circular building seemed a perfect fit, and a geometric counterpoint to the “Soviet Bloc” across the street. For his modern coliseum Stone came up with a unique structural design, a hub and spoke arrangement (“like a horizontal bicycle wheel”) that kept the building free of interior support columns and left a sixty-foot-diameter oculus for natural light. Stone then draped the translucent gold mesh and fiberglass ceiling over the tension cables, fifty feet above the ground floor.⁴⁸ From his New Delhi embassy Stone borrowed the interior pool, the exterior grill, and gold columns, then added a large elliptical reflecting pool to the tree-planted plaza. At \$5 million the US Pavilion was a bargain, perhaps a tenth of what the Soviets spent on theirs, and for many visitors gave the Americans an architectural edge over the “Soviet’s frosted-glass monolithic rectangle, which Belgians are already referring to as ‘The Refrigerator.’”⁴⁹

Stone would have preferred doing the pavilion as a total design concept, with a nuclear leitmotif “to sound a note of hope that man on the threshold of the atomic age may find a better means of achieving human understand-

ing and peace.”⁵⁰ Instead the State Department hired an independent exhibition designer who treated the building like a circus big top, to be filled with eye-catching entertainment—illustrator Saul Steinberg’s enormous mural, *The Americans*; American art (folk, contemporary, and indigenous); and American fashion, “the most talked-about exhibit at Brussels,” with the models descending a runway from the second floor to an island in Stone’s pool. Walt Disney’s film short, *America the Beautiful*, in Circarama, offered a 360-degree aerial tour of the Grand Canyon, the Golden Gate Bridge, and other showstoppers. It debuted in a theater-in-the-round designed by Stone to match the main pavilion, and became a huge hit with Expo ’58 visitors and later a feature attraction in Disneyland.⁵¹

Somehow the designers squeezed in Atoms for Peace among all the Americana. Westinghouse constructed an atomic town of the future at model-railroad scale, alongside a much larger scale facsimile of the pressurized water reactor core that would power it. When the demonstrator pulled out the control rod the reactor glowed blue, and electricity, in the form of flashing lights, went coursing through the tabletop town’s grid. Another crowd pleaser were the robotic arms for handling radioactive material, which visitors could try on for size. Within the context of the other exhibits, nuclear power seemed domesticated rather than alarming.

THE CAPITAL OF THE EUROPEAN UNION

By any measure Expo ’58 exceeded expectations. It attracted twice as many visitors as the 1935 World’s Fair on the same site and even beat the attendance figure of New York’s 1939–1940 fair. Except for the Atomium, the exhibits and pavilions at Expo ’58, large and small, vanished overnight, shipped back to their home countries or simply torn down. The United States donated its pavilion to the Belgian government, which subsequently turned it into a radio and television studio.⁵² None of the other icons, including Le Corbusier’s Philips Pavilion, designed as an immersive concert hall for Edgar Varese’s *Poème électronique*, survived. The modernist Brussels inspired by Expo ’58, by contrast, would endure.

Most importantly the fair’s success solidified Brussels’ claim as the capital city for an integrated Europe, over other contenders such as Strasbourg and Luxembourg. EEC and Euratom would be only the first supranational institutions to locate there. After the merger of Euratom, ECSC, and the EEC in 1967, Brussels became the home to an expanded European Council and Commission. It also became the site for most of the administrative offices of the European Parliament, and headquarters to NATO as well. To provide workplaces for the many thousands of civil servants these agencies brought with them, the Belgian government and the local authorities supported a drastic reconversion of the

formerly residential Leopold Quarter in the heart of Brussels into a European district.

Architect Rem Koolhaas, among others, has called for an architecture for Brussels worthy of a traditional world capital, something closer to the Houses of Parliament in London or the US Capitol in Washington, DC.⁵³ For now, the best that Brussels has done is the Berlaymont Building (1967), headquarters for the European Commission. Designed by a group that included Andre and Jean Polak, architects on the Atomium, it's a pale imitation of the UNESCO Building (1958) in Paris. The Paul-Henri Spaak Building (1993) for the European Parliament has gotten even harsher architectural reviews, often criticized as being an example of "failed integration,"⁵⁴ a particularly cutting comment given its purpose.

Meanwhile, the building that symbolized the postwar modernization of Brussels, the Atomium, has recently been restored to mint condition, and its aluminum skin replaced with stainless steel, in keeping with the original iron crystal theme. The lead designer for the Atomium's interior had first seen it at Expo '58 and said he sought to recapture its singular spirit: "We wanted to reflect the period's faith in scientific progress and its love affair with modernity."⁵⁵ The Mini-Europe theme park in the Atomium's shadow offers today's visitors to Heysel Park a chance to see 350 of Europe's most famous buildings meticulously reproduced on 1:25 scale, making the Eiffel Tower more than forty feet tall. The home country has ten buildings, the Berlaymont Building among them but not the Atomium. No model could possibly compete with the real thing. Like Expo '58 before it, Mini-Europe captures an idealized vision of an integrated Europe, projected into the past instead of the future but still anchored in Brussels, a capital idea in every sense.

EPILOGUE: AMERICA'S ANSWER TO SPUTNIK IN SEATTLE 1962

How quickly the Space Age eclipsed the Atomic Age, at least for one magical summer when imagined voyages to Mars and to distant galaxies replaced the "present tense" of mutually assured destruction. Expo '58 had promised atoms for peace. Seattle's 1962 Century 21 offered a future vision of the "Peaceful Uses of Space" that showcased the American space program, with no opportunity for rebuttal since the Soviets declined an invitation to participate. As one young visitor remembered, "It was as if a spaceship from a friendly future had landed in our own backyard."⁵⁶ Civic boosters initially envisioned the fair as a "Festival of the West" to put Seattle on the map as a regional business and tourist destination, to revitalize downtown, and to diversify a local economy heavily dependent on Boeing.⁵⁷ Instead the serious business of science and space exploration took center stage, in the official US Science Pavilion, in NASA's own pavilion,

and in corporate displays, most notably Boeing's "Spacearium" and Ford's "Adventure in Outer Space."

Century 21 perfectly captured the mood of a nation whose president had recently committed it to landing a man on the moon before the end of the decade. The Space Needle, the iconic symbol of space age aspirations, set the tone for a fair that had set its sights on the stars. At 605 feet, the Space Needle was twice the height of the Atomium and at its completion the tallest building west of the Mississippi. It would have felt right at home in Orbit City, the astro turf of the "Jetsons," the classic cartoon series that first aired on American television during the fair. The Space Needle, though now considered the most visible and enduring symbol of the Seattle fair, was something of a last minute addition. Conceived and paid for by a private consortium and given final approval just eighteen months before the fair's opening, the Space Needle put a visual exclamation point on Century 21. The fair's president first got the idea from a visit to Stuttgart Tower, a German television antennae with a restaurant at the top. Local architect John Graham took an inspired name and a literal back-of-a-placemat sketch and turned it into a daring but practical design. After several false starts Graham hit on a flying saucer theme that immediately caught everyone's eye. To calculate the appropriate height, the designers rented a helicopter and settled on 600 feet, exhilarating while still offering a good view of, and from, the fairgrounds below. To recoup a potentially risky investment, Graham suggested putting a revolving restaurant in the five-story "flying saucer" and charging for rides to the observation deck. Instead of using concrete that gave early renderings a clunky look, Graham devised a steel cruciform shaft, pinched at the waist. Three legs converged at 370 feet, then flared out into six arms supporting the top ring. Graham scaled up a revolving restaurant scheme he had planned for a Hawaiian hotel for the Top of the Needle restaurant that did a full turn once an hour against the stunning backdrop of Mount Rainer. For a frugal \$4.5 million Graham had delivered a space-age classic, decked out for the fair in "Astronaut White" for the legs, "Orbital Olive" for the core, "Re-Entry Red" for the halo, and "Galaxy Gold" for the roof. Even with wait times up to three hours, Graham's Eiffel Tower for the space age attracted 2.3 million guests during the fair, and easily repaid its investors⁵⁸ (fig. 1.3).

The Space Needle may have been the showstopper, but the fair's real centerpiece was the US Science Pavilion. Still smarting from Sputnik and a relatively poor showing compared with the Soviets in Brussels, the federal government, with strong backing from the scientific community, appropriated \$10 million for a science exhibit twice as large and nearly twice as costly as the entire US Pavilion at Expo '58. To house it, architect Minoru Yamasaki first sketched out a soaring tower. Alerted to the final Space Needle design, he reconfigured his original



Fig. 1.3. Seattle Space Needle viewed from the US Science Pavilion. *Source:* City of Seattle Archives.

concept as a cluster of five interconnected buildings arranged around an open courtyard crowned with a cluster of open-ribbed, gleaming white arches rising more than a hundred feet above reflecting pools dotted with pedestal fountains. Dubbed “space gothic,” a motif Yamasaki repeated on the facades of the exhibition buildings, the Science Pavilion proved to be even more popular than the Space Needle, attracting 6.7 million visitors at a fair with a total attendance of 9.2 million.⁵⁹

The introductory film, *The House of Science*, by Charles and Ray Eames, gave viewers a quirky, kaleidoscopic, and surprisingly informed history of science from ancient times to the present, shown as a fast-cutting montage on six screens. Like the film’s script, the exhibits stressed the methods of science

rather than its “greatest hits.” The Boeing Spacearium, a theater set into a Buckminster Fuller geodesic dome in one of the Science Pavilion buildings, projected a fifteen minute “60-thousand-billion-billion mile ride into outer space and back” in Cinerama, a three projector system that cast images onto the dome’s ceiling for standing room audiences of one thousand visitors at time, some 4.3 million people by the close of the fair. After the show the audience spilled out into the “Junior Laboratory of Science” for some hands-on education.⁶⁰ (The US Science Pavilion officially closed on October 21, 1962, and the Pacific Science Center opened the next day in the same space.)

In contrast to Brussels, which highlighted the rivalry between competing Cold War political and economic systems, Seattle underscored a longer standing ideological tension between science and organized religion. As an architectural riposte to Yamasaki’s secular cathedral of science, Christian Witness, representing local Protestant churches, commissioned a midcentury modernist pavilion by Robert Durham directly opposite the entrance to the Science Pavilion, featuring the film *Redeemed* that spoke directly to the spiritual challenges of the atomic bomb. The Evangelical Moody Bible Institute contributed a pavilion, Sermons from Science, while a local Episcopal bishop organized a symposium on Space Age Christianity. While not as popular with visitors as the Space Needle or the Science Pavilion, the religious attractions offered a visible reminder that science, at least in the American context, could not entirely ignore the claims of organized religion in such a public setting.⁶¹

Ford Motor Company placed its own space ride attraction just outside the Science Pavilion, in a synergetic dome designed by one of Fuller’s collaborators and competitors. Ford stewardesses welcomed aboard one hundred passengers at a time into a 1G space vehicle for a tour of the earth, moon, the planets, and the latest US satellites, Echo, Vanguard and Tiros, each with its own distinctive beep. Back on earth visitors got a look at the latest in automotive transportation, including Ford’s Seattle-ite XXI concept car, an obvious next step for Ford’s Galaxie series, with six-wheel drive, an onboard computer, and a prescient scrolling road map.⁶² Down-to-earth thrill seekers could visit the midway, with such space-themed attractions as the Meteor, and the Space Whirl, and the Flight to Mars, a fun house ride in the dark with space pirates and other frights.

NASA recognized an unsurpassed opportunity for public relations when it saw one and organized its own pavilion, underwritten by a dozen of its major contractors, including Boeing, Hughes, Aerojet, McDonnell, and Rocketdyne. Intended to introduce visitors to the relatively new space agency, the exhibits highlighted the “United States’ peaceful aeronautic-space program—what has been accomplished scientifically and technically, how our daily lives have been affected, and what may be in store for us in the foreseeable future.”⁶³ Visitors had an opportunity to see models of the latest weather and communications

satellites, learn about tracking stations, astronaut selection and training, and the space sciences, and check out a full-scale mockup of the Saturn V rocket engine cluster that would be carrying men to the moon. Of course nothing could match a close encounter with a live astronaut or his space capsule. John Glenn, accompanied by rocketmeister Wernher von Braun, toured the fair on May 10, 1962. Glenn arrived by Monorail, starred in the dedication of the NASA Pavilion, and rode to the top of the Space Needle. In August NASA put Glenn's Friendship 7 Mercury capsule on display as the first stop in its worldwide tour, inviting visitors to touch the future.⁶⁴

If Century 21 did not transform downtown Seattle in quite the way its boosters had intended, it certainly did signal the emergence of Seattle as a high-tech hub. Boeing weathered the boom-and-bust characteristic of the aerospace industry and has yet to surrender its title as the region's largest employer. These days Seattle may be better known for newer generations of high-tech companies, notably Microsoft and Amazon. Microsoft's cofounders, Seattle natives Bill Gates and Paul Allen, visited the fair as children but remembered it vividly. Whether or not "a direct line can be drawn from the 'can do' zeitgeist of the fair to the creation of Microsoft, Amazon and their progeny,"⁶⁵ as the recent documentary *When Seattle Invented the Future* suggests, there can be no doubt that the city has been reinventing the future ever since.