

INTRODUCTION  
MODERNISM, ORNAMENT, REFORM

ON A MILD WEDNESDAY EVENING IN SEPTEMBER 1916, sixty thousand residents of New York City gathered on the south shore of the lake in Central Park, filling the lawn adjacent to the Bow Bridge and spilling over onto the nearby Bethesda Terrace. Facing the crowd across the water was a wooden stage projecting out from shore. A podium at its center bore a circular shield, and tall pylons at either side supported large hexagonal lanterns. Overhead stretched cables bearing an array of circular and rectangular shields decorated with unfamiliar geometric patterns. They were echoed by similar lanterns hanging from trees and nestling in shrubs around the lake. Even the park lamps had been transformed by ornamented shades.

As night fell and the crowd grew, a sixty-five-piece orchestra seated itself on the platform while a throng of eight hundred singers clad in white robes assembled on the shore behind. Shortly after eight o'clock, a tall man dressed in a white suit stepped onto the podium, raised his arms, and held them poised in the air. The crowd quieted down. At his signal, the chorus began to sing: "My country, 'tis of thee, sweet land of liberty, of thee I sing." At the first note of "America," the shields and lanterns lit up with electric light (fig. I.1). Incandescent fixtures behind the shields illuminated the chorus with clear white light, tempered for the eyes of the audience by the colorful lanterns and shields, which glowed like stained-glass windows. The New York Community Chorus had begun its first annual Festival of Song and Light.

The Festival of Song and Light in Central Park in 1916 was one of eight such festivals staged in four different cities between 1915 and 1918, at the peak of Progressive Era reform activism. These large-scale outdoor singing festivals, which engaged audiences of up to sixty thousand in participatory singing of classical oratorios, national hymns, and popular anthems, were among the leading expressions of a nationwide community singing movement that paralleled the Progressive movements for community drama and pageantry, park and playground reform, and settlement-house construction. By gathering members of diverse classes and ethnic groups together in weekly sing-alongs and seasonal music festivals, middle-class reformers used choral singing to overcome the fragmentation of metropolitan society by assimilating thousands of mostly immigrant participants into a shared civic community.

The Festivals of Song and Light stood out among community music events of the mid-1910s for their large size, innovative musical practices, and success at creating an alternative public sphere dedicated to "brotherhood" across lines of social division. They were equally noteworthy for their architecture, which employed a distinctive kind of ornament that gave visual expression

to the potent new social and aesthetic experience of community singing. The festival stages, decorations, and lighting were designed by Rochester, New York, architect Claude Bragdon (fig. I.2) using his newly invented system of “projective ornament,” a technique for generating ornament from geometric patterns. As the visual signature of community singing in New York, Syracuse, Rochester, Buffalo, and other cities in the region, projective ornament symbolized the progressive potential of modernity for tens of thousands of participants and audience members.

Bragdon’s staging of the Song and Light festivals marked the peak of a long career dedicated to mobilizing architecture and ornament in the service of progressive social reform. From the turn of the twentieth century through the 1920s, Bragdon was a leading figure in the first generation of modernist architects. His criticism in professional journals and popular magazines argued that only “organic architecture” based on nature could foster democratic community in discordant industrial society. The buildings he designed in Rochester and surrounding towns, ranging from modest houses to grand public buildings, embodied this progressive ideal through their simplicity and impersonality, their geometric composition and coordination with neighboring structures, and their fusion of Eastern and Western architectural traditions into a transnational synthesis. With the invention of projective ornament in 1915, Bragdon made his most original contribution to modern architecture by translating his program of social reform into a new way of conceptualizing and designing ornament. Even after he closed his architectural practice and moved to New York after World War I to pursue a second career as a Broadway stage designer, Bragdon shaped the work of younger colleagues through his writing and designs.<sup>1</sup>

Bragdon was an easterly outlier of the midwestern reform circle known at the time as the Chicago school but more often today called the prairie school. Inspired by the writing and work of Louis Sullivan, members of this group took nature as the model for a modern, distinctively American architecture capable of reforming industrial society and renewing its democratic culture. Frank Lloyd Wright, Walter Burley Griffin, Marion Mahoney, George Grant Elmslie, William Gray Purcell, Dwight H. Perkins, George W. Maher, and many others in and around Chicago designed buildings that responded to the midwestern landscape, with its distinctive plants and seemingly unlimited horizon. By imbuing their buildings with qualities they admired in nature, these practitioners of “organic architecture” sought to preserve what they valued in American democracy while selectively accommodating changes associated with industrialization.

As a young architect in Rochester, situated midway between Chicago and New York on the Erie Canal and the major rail lines, Bragdon absorbed midwestern ideas not through office training, as was typical of other progressive architects, but through journals, correspondence, and travel to expositions and professional meetings. Perhaps as a result, he embraced the Chicago school only after mastering other architectural movements. After training with architects in Rochester, New York, and Buffalo in the early 1890s, he traveled to Chicago for the Columbian Exposition, which convinced him of the virtues of ensemble planning and Renaissance revival architecture. Bragdon adopted “city beautiful” ideals, traveling to Italy to study Renaissance buildings in person and employing their architectural language in his own designs. Combined with techniques and ideas from western New York arts and crafts movement circles—not to mention extensive reading in criticism and philosophy—this valuable expertise in the Renaissance-inspired “revival of taste” allowed Bragdon, despite his lack of a college education, to become a leader among his generation of Rochester architects.

Around the turn of the twentieth century, Bragdon adopted the rhetoric of organic architecture from Sullivan and incorporated the progressive call for a modern American architecture expressing the nation’s industrial and democratic character. Inspired by Sullivan’s “Kindergarten Chats,” a manifesto serialized in the architectural press in 1901 and 1902, Bragdon traveled to meetings of the Architectural League of America, the progressive and predominantly midwestern professional organization that took Sullivan as its hero. Bragdon’s stirring criticism, which embraced and transformed Sullivan’s ideas about organic architecture, soon gained him a national audience among architects and general readers alike. It also helped him build relationships with other midwestern progressives of his generation, including Irving K. Pond, Hugh M. G. Garden, and Emil Lorch as well as Purcell, Elmslie, and Wright. Bragdon’s national fame was cemented by the success of his many commissions in and around Rochester, including police stations, club buildings, a library, a classroom building, two YMCA buildings, a railroad terminal, and a chamber of commerce building, not to mention numerous houses and domestic renovations.

Though Bragdon was closely attuned to the new principles and practices emerging from Chicago, he was geographically isolated from the city’s new buildings and professional milieu. As he absorbed progressive ideals, Bragdon reworked them based on a preexisting conviction that architecture could best emulate nature by embodying an abstract, universal mathematical order



FIGURE 1.2 Portrait of Claude Bragdon, 1890s. Courtesy Peter Bragdon and the Department of Rare Books and Special Collections, University of Rochester Library

disclosed by esoteric canons of knowledge, including the Pythagorean tradition of harmonic proportion. In his treatise *The Beautiful Necessity* (1902) and in his buildings of the 1900s, Bragdon developed an alternative organicism that challenged some of the core premises held by his colleagues to the west. Whereas for Sullivan and Wright a building was most organic when it expressed the individual character of its creator, Bragdon saw individualism as a distortion of nature's impersonal order and a hindrance to both democratic consensus and social harmony. In his criticism and design work, "nature" became a tool for bringing individual expression into line with larger social necessities. Bragdon promoted regular geometry and musical proportion as ways for architects to harmonize buildings internally and with their urban context. Buildings such as the First Universalist Church (1907), New York Central Railroad Terminal (1909–1913) (fig. 1.3), and Rochester Chamber of Commerce (1915–1917) exemplified his distinctive synthesis of Chicago school organicism with harmonic proportion, number symbolism, and Renaissance architecture.

In the early 1910s, Bragdon came to see modernizing ornament as the most urgent task facing advocates of organic architecture. Traditionally, ornament had articulated social and ontological differences. Whether on clothing, furnishings, buildings, or even culinary dishes, ornament traditionally had marked membership in particular grades and segments of society. It distinguished sacred from secular, aristocrat from bourgeois, male from female, native from stranger. By the early twentieth century, however, ornament had become a means of marking class status and cultural prestige through

**FIGURE 1.3** New York Central Railroad Terminal, Rochester, New York, 1909–1913 (demolished): main façade viewed from across Central Avenue, 1913. Courtesy Department of Rare Books and Special Collections, University of Rochester Library



conspicuous consumption. Ornamental forms from the history and national traditions of Europe were especially favored by designers and clients seeking to articulate differences of class, gender, nationality, and religion. This use of ornament for what sociologist Thorstein Veblen had called “invidious distinction” troubled Bragdon, who in 1911 lamented the lack of a “common language” for architecture and art.<sup>2</sup>

Even as he rejected the use of ornament for invidious purposes, though, Bragdon valued ornament as a part of architecture irreducible to merely “materialist” considerations such as utility and economy. Bragdon set out to enlist ornament in a progressive critique of modern alienation by turning it from a technique of differentiation into a mechanism of social integration. He envisioned projective ornament, developed only a year before its use in the Song and Light festival at Central Park, as a universal ornamental language applicable to all manner of designs. Basing ornament on mathematical patterns abstracted from nature, he created a system for generating a single impersonal “form-language.” Like the invented language Esperanto, projective ornament was a universal language intended to supersede partisan allegiances.

Unlike Sullivan, who generated ornament from naturalistic plant forms, or Wright, who conventionalized them into decorative motifs and plan designs, Bragdon based his ornament on pure geometry. Inspired by theosophy, a modern “spiritual science” dedicated to synthesizing ancient Hindu cosmology with the latest scientific discoveries, Bragdon approached geometry as a symbolic system capable of revealing existential truths. He combined mathematician Georg Friedrich Bernhard Riemann’s 1854 theory of *n*-dimensional space, which demonstrated that space could possess a potentially infinite number of dimensions, with a theosophical understanding of the fourth dimension as a transcendental space of human spiritual perfection. In the early 1910s, Albert Einstein and Hermann Minkowski were already developing relativity theory and the concept of space-time, but their idea of the fourth dimension as time would not eclipse the concept of the fourth dimension as a higher spatial dimension until the early 1920s. Meanwhile, Bragdon absorbed a Victorian tradition of moralizing mathematics that had invested with ethical and existential significance the idea of a physically real four-dimensional “hyperspace” beyond the range of normal sensory perception. The fourth dimension explained the mysteries of consciousness, spiritualist phenomena, and the afterlife, and it carried ethical imperatives to “cast out the self” in favor of altruistic devotion to humanity as a higher-dimensional whole.

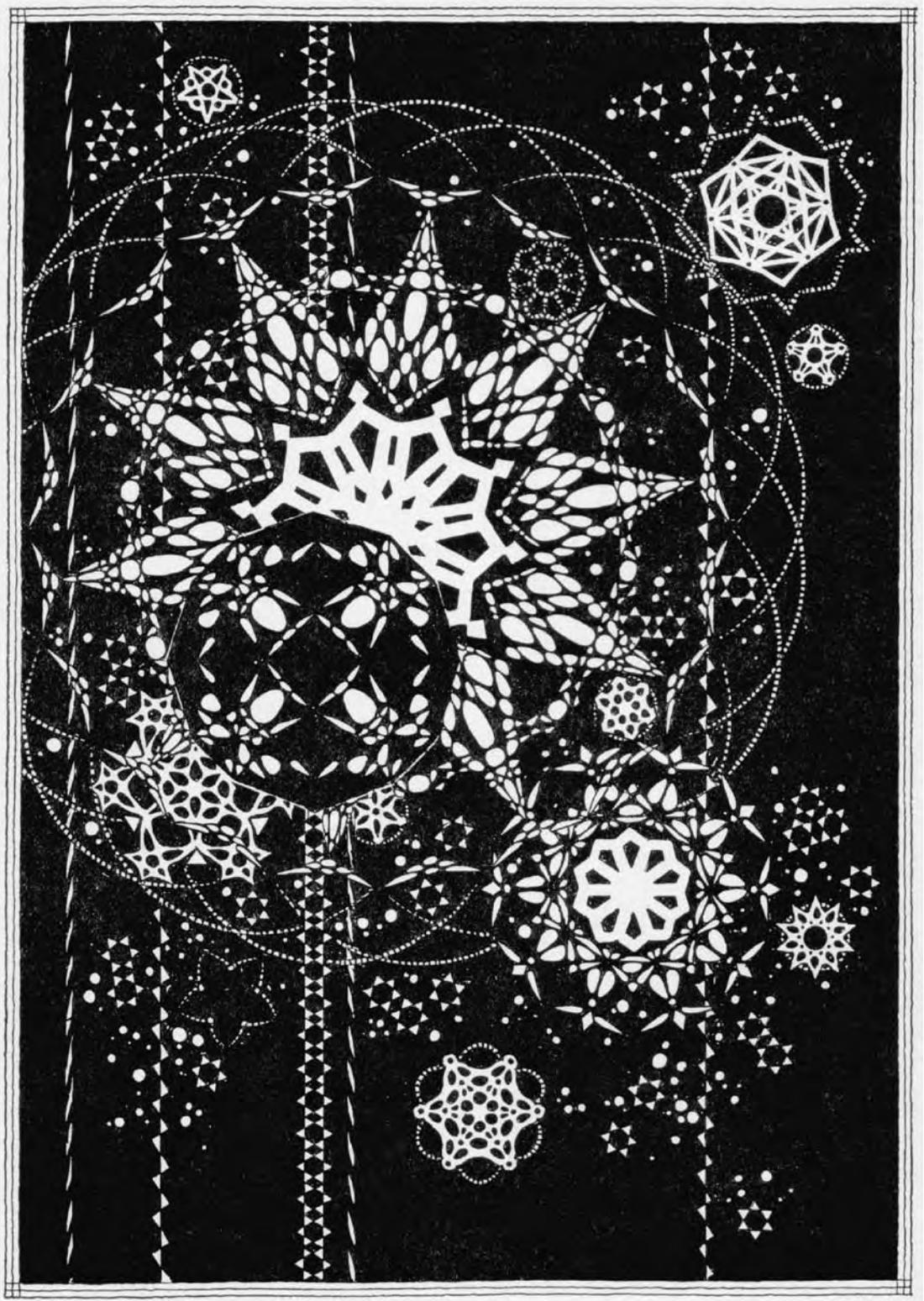


FIGURE 1.4 Claude Bragdon, harmonic composition in projective ornament, 1920s. Bragdon, *The Frozen Fountain* (New York: Knopf, 1932), frontispiece.

Projective ornament translated this four-dimensional cosmology and altruistic ethos into architectural form. Using the graphic technique of axonometric projection to generate two- and three-dimensional representations of three- and four-dimensional shapes, Bragdon created forms and patterns that embodied his mystical conception of nature (fig. I.4). Its emphasis on two-dimensional graphic pattern made projective ornament applicable to the work not only of architects but also of artists and designers in other fields. By integrating the surfaces of buildings with those of paintings, publications, textiles, and furnishings (fig. I.5), projective ornament addressed mass audiences through a range of media, including graphic design, decorative art, architecture, and festival. Through designs that favored crystalline geometric patterns over free-flowing arabesques, projective ornament expressed Bragdon's conviction that democracy required individuals to sacrifice their independence in deference to the needs of social order. By extending this geometric system to the surfaces of buildings and other media, Bragdon aspired to turn his divided metropolitan society into a naturally harmonious whole. His modernist ornament was a form of sumptuary regulation, the practice of regulating consumption in the service of social and political goals.

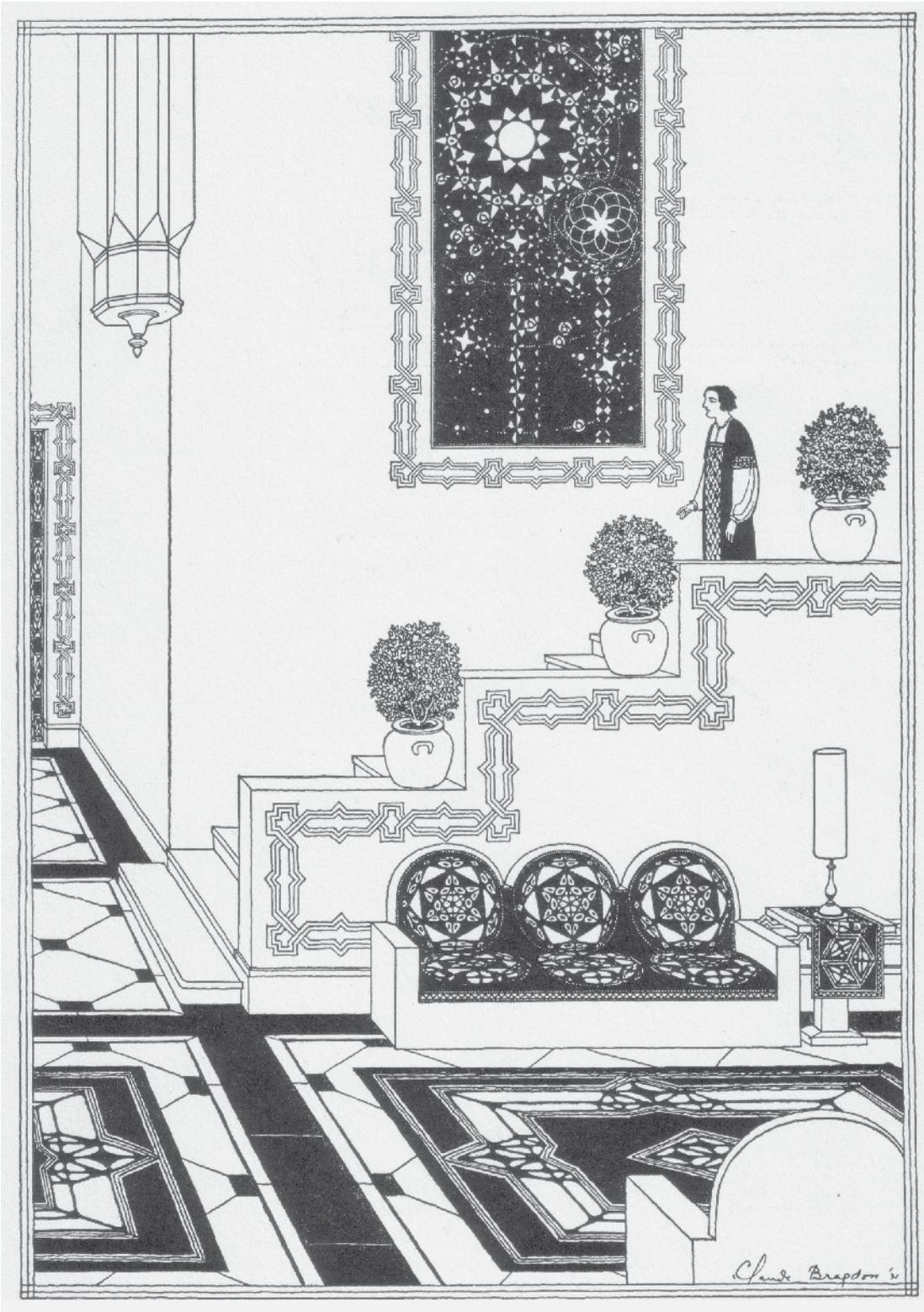
In order that his ornamental language might replace affiliations of class, nationality, and religion with allegiance to an international "brotherhood of man," Bragdon embellished the geometries of projective ornament with traits from a wide range of decorative traditions, including Moorish, Ottoman, Mughal, and Japanese motifs as well as those of Western culture from antiquity through the Renaissance. He integrated these motifs into an allegory of the reconciliation of opposites, represented formally by the disciplining of sinuous arabesques to crystalline geometries. Adapting ideas from nineteenth-century English reformers John Ruskin and Owen Jones, Bragdon treated the contrast between crystal and arabesque as a figure for a range of differences characteristic of modernity: between East and West, antiquity and modernity, faith and reason, women and men, capital and labor, social order and individual will. By harmonizing crystal and arabesque based on a shared proportional canon, projective ornament designs simultaneously dramatized the synthesis of different cultures into a universal order and allegorized the sacrifice of self-interest to the collective good essential to democratic self-government. Though its name referred primarily to the axonometric technique that generated its decorative patterns, Bragdon's ornament was also intended to project or propel modern society forward into a better

future. Projective ornament symbolized the promise of modernity to inaugurate a new era of worldwide social solidarity.

Bragdon used his system of ornament in houses and the Rochester Chamber of Commerce building; in the design of magazines, posters, and books; and in theatrical sets and costumes. Through its role in civic architecture, print media, and the theater, projective ornament began to integrate these distinct realms into a single public sphere visually unified by geometric pattern. This process was amplified by the prominence projective ornament acquired in the community singing movement. By translating Bragdon's ideal of social harmony through universal ornament into experiential terms for mass audiences, the Festivals of Song and Light gave many participants the sense, as critic Lewis Mumford later recalled, that "we were on the verge of translation into a new world, a quite magical translation, in which the best hopes of the American Revolution, the French Revolution, and the Industrial Revolution would all be simultaneously fulfilled."<sup>3</sup> By synthesizing art and science, high culture and mass culture, and Eastern and Western architectural traditions into an abstract ornamental language suitable to a wide range of media and materials, Bragdon used ornament to form a mass counterpublic out of linguistically, culturally, and socially differentiated urban populations.

In 1915, fresh from the completion of his Rochester train terminal and with the new chamber of commerce building under construction, Bragdon gave a pair of lectures at the Art Institute of Chicago in which he outlined his theory of organic architecture and gave the first public presentation of his new system of projective ornament. These talks were part of a series given that year by leading practitioners of rival schools of American architecture. Ralph Adams Cram, the principal American exponent of the Gothic revival, had given two presentations, as had classical revival architect Thomas Hastings. As the representative of the Progressive cause, Bragdon had the honor of representing modern architecture in its home city, with Sullivan sitting in the front row of the Art Institute auditorium. His criticism, widely published since the turn of the century, would continue to appear in the leading professional journals for another fifteen years. From the turn of the century through the early 1930s, Bragdon was one of American architecture's leading modernists—a fact recognized by critic Sheldon Cheney, who in his survey *The New World Architecture* (1930) heralded Bragdon as a "pioneer," praising projective ornament as a new decorative mode appropriate to the modern age.<sup>4</sup> Yet following his death in 1946, Bragdon all but disappeared from histories of modern architecture. Why is he today nearly unknown?

FIGURE 1.5 Bragdon, interior coordinated by projective ornament patterns, ca. 1932. Bragdon, *The Frozen Fountain*, 98.



Bragdon's absence from accounts of modern architecture resulted from the creation of a normative model of architectural modernism in American scholarship of the 1930s and 1940s. Though he figured prominently in some of the earliest accounts of modernism, such as Cheney's *New World Architecture*, Bragdon lost currency over the succeeding decade as American architects, critics, and historians began to define modernism in new terms that privileged continuous three-dimensional space as the primary medium of architecture and derogated ornament as a wasteful holdover from preindustrial society. Between 1929 and 1936, the many strands of modernism in American architecture were winnowed down to construct a clear American genealogy for what came to be known as international style modernism.

Much of this work was done by the new Museum of Modern Art in New York, which inaugurated a long series of architecture shows with the exhibition "Modern Architecture: International Style" in 1932. In this exhibition and in books published by its curators, historian Henry-Russell Hitchcock Jr. and architect Philip Johnson, Bragdon was excised from the narrative of modernism in American architecture, particularly through juxtaposition with Frank Lloyd Wright, his more successful peer. Although they had reservations about unduly promoting Wright, who they felt had already done his best work, Hitchcock and Johnson accorded him a pivotal position in the genesis of the European work that formed the core of their exhibition. They characterized international style architecture through functional planning, industrial building technique, continuous space, and the suppression of ornament to achieve smooth wall planes. Projects by Walter Gropius, Ludwig Mies van der Rohe, J.J.P. Oud, Le Corbusier, and others set the tone for the exhibition, while work in the United States by Raymond Hood, Richard Neutra, Howe & Lescaze, and the Bowman Brothers construction firm demonstrated the relevance of this European phenomenon to American building. Overcoming his own ambivalence about participating in the show, Wright contributed a new house design that continued the line of investigation he had pursued in his textile block houses of the 1920s yet incorporated some of the formal and visual qualities used by the European architects whose work formed the core of the show, initiating a negotiation that would characterize his work of the subsequent decade.<sup>5</sup>

In other accounts of modern architecture from the late 1920s and 1930s, Hitchcock consolidated the idea of Wright as a bridge from nineteenth-century American innovators such as H. H. Richardson, John Wellborn Root, and Sullivan to twentieth-century European modernists. Hitchcock praised

Wright's buildings for the spatial continuity that linked public rooms to one another and to their surrounding landscapes. At the same time, he disparaged Wright's liberal use of ornament as a dangerous manifestation of "the individualist humanitarianism of the 19th century," which was out of step with a new industrial order in which large-scale manufacturing systems favored objective standards and repeatable forms over subjective creations and custom fabrication.<sup>6</sup> Characterizing ornament and space as opposed architectural values, Hitchcock used this distinction to differentiate Wright from his mentor Sullivan. In Hitchcock's account, Wright's greatest accomplishments were spatial innovations such as the "unprecedented... three-dimensional organization of planes" in the prairie houses, which he asserted had emerged only "despite the trivial patterns in the leaded glass reminiscent of Sullivan's geometric dallings."<sup>7</sup>

These views hardly seem controversial today, accustomed as we are to associating modernism with the elimination of ornament from the surfaces of machine-age buildings. Yet this conviction that three-dimensional continuous space was a key element in modern architecture, and that ornament had no place in modern buildings, was new to American architectural discourse in the early 1930s, as the profusion of machined ornament in art deco architecture of the 1920s reminds us. It reflected the application to American architecture of functionalist and productivist ideas developed over the preceding quarter century by German and Austrian cultural reformers of the *neue Sachlichkeit*, the movement for a "new objectivity" in architecture and design. These early European modernists treated the elimination of ornament as a way of mobilizing architecture in the project of social modernization. To them, ornament was a vestige of aristocratic court society, an outdated technique that would have to be eliminated for architecture to reflect fully the economic and social values of the ascendant middle class.

By advocating elimination of ornament, European designers and critics such as German architect and government minister Hermann Muthesius, Vienna architect Adolf Loos, and, later, Swiss architect Le Corbusier used architecture and criticism to align consumer taste with the capabilities of industrial production and the modern principle of economic rationality. Unlike the architects of the Vienna secession, who along with other art nouveau designers used hand-worked luxury materials to create unique designs infused with their creative subjectivity, these reformers advocated design practices that curtailed individual expression by embracing standards based on the processes and economies of mass production. Espousing

a middle-class ethos of functionalism, economic rationality, impersonality, and restraint in architecture and design, these modernists redirected investment from luxury expenditures to factories, sanitary facilities, and municipal infrastructures. Whereas art nouveau designers had invented new ornamental forms to link architecture with art, furniture, and fashion, *neue Sachlichkeit* modernists pursued architecture's autonomy by suppressing ornament in favor of naked structures, white walls, and crisp geometric forms.

Prior to the 1930s, the productivist ethos characteristic of European modernists had little impact on the ways American architects and clients conceived and practiced modern architecture. The same is true of the narrowly functionalist rejection of ornament. American architects committed to progressive social reform, including not only Bragdon but also contemporaries such as Pond, Maher, and Wright, more often sought to invest ornament with new meanings so it could help their society negotiate the social tensions caused by immigration, industrialization, and increasing class stratification. While these American progressives shared with *neue Sachlichkeit* architects the goal of regulating the role ornament played in their society's patterns of consumption and representation, they reinvented ornament rather than eliminating or sublimating it.<sup>8</sup>

In order to apply *Sachlichkeit* principles retrospectively to Wright's architecture, Hitchcock had to isolate ornament from other aspects of the work and contain it within the narrative dead end of a supposedly outdated "humanitarianism." To accomplish this, he contrasted Wright's spatial innovations against Bragdon's *n*-dimensional ornament, which Hitchcock associated with Sullivan's ornamental designs. In Hitchcock's *Modern Architecture: Romanticism and Reintegration* (1929), in which he staged some of the ideas that would shape the Museum of Modern Art exhibition three years later, Hitchcock explained that

in the later part of his life Sullivan devoted much time to the vain task of proselyting for his theory of form following function and of free ornament. His *System of Architectural Ornament* was illustrated by plates in which his theory was carried to its furthest point in a naturalistic fantasy entitled *Impromptu* and a Euclidean fantasy entitled *Awakening of the Pentagon*. In this particular line his most important follower has been Claude Bragdon. The latter has supported his fourth dimensional design schemes on theosophical grounds; but he has in his buildings seldom shown any very definite renewal of even

three dimensional form. Fortunately this was not the only continuance of Sullivan's ideas, which were carried much further by his pupil Wright.<sup>9</sup>

Two years later, Lewis Mumford concurred with Hitchcock's assessment, arguing that Sullivan's "tendency to take refuge in ornament as a grateful intoxicant" had limited his achievement and proclaiming that in Wright's buildings "Sullivan's best ideas found actual expression more completely and convincingly than in his own work."<sup>10</sup> The conception of modern architecture as spatial rather than ornamental, rational rather than mystical, was negotiated in part by casting out Bragdon, who represented two of the major poles against which Hitchcock developed his conception of modern architecture as a rational art of space.

Wright was among those American modernists who from the turn of the twentieth century through the 1920s devoted considerable energy to developing new ways of using ornament. Following a trip to Europe during which he familiarized himself with the work of Joseph Maria Olbrich and other Vienna secessionists, Wright used ornament to elaborate complex symbolic and iconographic programs in such buildings as the Midway Gardens (Chicago, 1913) and Imperial Hotel (Tokyo, 1916–1922). Nonetheless, and despite his reservations about being enlisted to support the emergent international style, Wright did not hesitate to follow Hitchcock in disparaging Bragdon so as to increase his own stature. In spring 1932, while the "International Style" show was still on display in New York, the *Saturday Review of Literature* published Wright's review of Bragdon's new book *The Frozen Fountain*, a treatise that introduced students and general readers to his theory of organic architecture and system of projective ornament. After acknowledging that he and Bragdon shared a mentor in Sullivan, Wright criticized Bragdon for misunderstanding Sullivan's work. "Architectural depths are seldom if ever plumbed by geometrical devices," he asserted. "Certainly not Louis Sullivan's. They were too human. . . . Louis Sullivan devised a system of ornament out of himself with a sense of organic unity warmly exponent of the individuality of one Louis Henry Sullivan." In Bragdon's formulaic "system for devising geometrical patterns," by contrast, there was "very little room for Mr. Bragdon's individuality or anyone's."<sup>11</sup>

Wright went on to challenge Bragdon's claim to the legacy of Sullivan, who had died eight years earlier, and asserted both his own primacy among Sullivan's inheritors as well as his own individual importance in generating the forms and features that had come to characterize modern architecture

in Europe.<sup>12</sup> Restaging Hitchcock's use of the fourth dimension to dissociate Bragdon from the newly important criterion of three-dimensional space, Wright suggested that Bragdon "applies to [Sullivan] more of the fourth dimension than necessary if he will take the simple third we now have and give it spiritual interpretation." Wright's review also manifested his anxiety about the prominence Le Corbusier was acquiring in defining modern architecture. Calling Bragdon a "necromancer," Wright used projective ornament to criticize the use of proportional canons in design, in particular Le Corbusier's "superstitious" use of regulating lines to determine the proportion and composition of plans and elevations. Hitchcock's lead was soon followed by still other writers, as when prairie school architect and critic Thomas Tallmadge a few years later dismissed Bragdon, whom he called "the architectural necromancer of fourth dimensional design," while praising Wright as "the most brilliant of Sullivan's disciples... superior to him in composition, in both plan and elevation."<sup>13</sup>

Bragdon had completed his last building commissions during World War I, subsequently closing his office and turning his attention to writing and stage design, so he was hardly a threat in 1932 to Wright's professional status. At stake was a different issue: authority to speak for the deceased Sullivan and so to claim the mantle of the nation's foremost proto-modernist. Bragdon had been one of Sullivan's most visible interpreters in the architectural and popular press since the turn of the century. Bragdon had devoted a chapter of his book *Architecture and Democracy* (1918) to heralding Sullivan as a "poet and prophet of democracy." In the years since the older architect's death, Bragdon had published and quoted extensively from his correspondence with Sullivan, supplying a foreword to Sullivan's *Autobiography of an Idea* (1924) and an obituary in the American Institute of Architects journal. He had written another chapter on Sullivan for an essay collection published in 1929 and compiled selections from Sullivan's correspondence for *Architecture* magazine two years later. In 1934, at the request of Sullivan's executor and longtime draftsman George Grant Elmslie, Bragdon would edit, introduce, and republish the "Kindergarten Chats," adding an introduction that included still more Sullivan correspondence. In the 1920s and early 1930s, in fact, Bragdon was the single figure most closely associated with Sullivan in the architectural press.<sup>14</sup> Wright's review betrayed his anxiety that Bragdon had acquired too large a measure of authority to speak for their former mentor.

Three years later, the Museum of Modern Art began redefining Sullivan's work to downplay its ornament and highlight its proto-functional aspects

instead. At the first meeting of the museum's new Committee on Architecture, in March 1935, curator Alfred Barr made the first order of business the arranging of publication assistance for a new book on Sullivan. Hugh Morrison's biography, titled *Louis Sullivan: Prophet of Modern Architecture* (1935), was the beginning of a reinterpretation of Sullivan in light of the new criteria for modernism established by the "International Style" exhibition. Bragdon's several attempts to interest Barr in mounting a show of his own work over the next several years predictably came to nothing. The museum had launched its project of overwriting the pluralism of early twentieth-century American architecture—including not only a range of historical revival styles but also a diversity of modernisms—with a single modern style based on the innovations of its selected European architects.<sup>15</sup>

Bragdon's marginalization as an ornamentalist was compounded by his association with the fourth dimension of space. The rise of continuous three-dimensional space as a defining characteristic of modern architecture gained momentum only after the 1930s. In his treatise *Space, Time, and Architecture* (1941), Swiss historian Sigfried Giedion interpreted modernism in architecture and the visual arts as the artistic corollary to relativity theory in physics. Giedion identified the transparency, simultaneity, and interpenetration between interior and exterior that characterized some modernist paintings, sculptures, and buildings as products of a "secret synthesis" between modern art and relativity science. Projecting space-time associations not known outside of physics until the 1920s onto modern paintings, sculptures, and buildings from the early 1900s, including some that had been inspired by the Riemannian concept of a spatial fourth dimension, Giedion obscured the role that Riemann's theory and its appropriation by mystical and philosophical social critics had played in stimulating modernist innovation. This interpretation, which remained authoritative for decades, ensured that Bragdon's work would remain outside the modernist canon. Though he figured marginally in midcentury humanist accounts of modern architecture by Mumford and Italian architect and critic Bruno Zevi, Bragdon disappeared from mainstream histories.

Scholarship in architecture, art history, and cultural history since the rise of postmodernism has opened many new perspectives on modernism and the polemical histories written to legitimate it from the 1930s onward. As attitudes toward mainstream modernism grew more skeptical, historians began

to reconstruct the extensive role played by mystical and spiritual motivations in modernist architecture and art. The rationalist concept of modernism has been substantially modified by recognition of the important role played by transcendentalism in Sullivan's thinking and work, of theosophy in the design practices employed by H. P. Berlage and other Dutch modernists, and of many other kinds of mystical and cosmological thinking in the work of architects as varied as William Lethaby, Bruno Taut, and Louis Kahn.<sup>16</sup> Scholarship on concepts of space in modern art has demonstrated that many pioneering modernists were inspired not by relativistic spacetime, as Giedion claimed, but by Riemann's theory of  $n$ -dimensional space, especially as it was popularized by writers who mobilized the fourth dimension of space as a way to imagine a wide range of social transformations. The concept of a fourth dimension of space, drawn from mathematics but mediated through mystical belief systems such as theosophy, was integral to the turn to abstraction in the paintings of František Kupka, Wassily Kandinsky, and Kasimir Malevich, as well as in the neoplasticist painting and architecture of Theo van Doesburg and Cornelis van Eesteren.<sup>17</sup> New scholarship has also provided conceptual tools with which to consider anew the question of ornament, recovering its importance as a nexus of economic, social, and psychological exchange, not only prior to but also during the heyday of modernism.<sup>18</sup> Architecture, meanwhile, has increasingly come to be seen as a technique for forming mainstream and alternative public spheres.<sup>19</sup>

These new perspectives call for a reconsideration of Bragdon's distinctive approach to the progressive project of developing an organic architecture. Accordingly, this book reconstructs Bragdon's architectural career from the late 1880s to the early 1930s, encompassing his training and early work, his more than twenty years of professional practice in Rochester, and his continuing architectural activity during a second career as a stage designer in New York. It focuses in particular on Bragdon's work of the 1910s, the decade during which his distinctive conception of organic architecture achieved its fullest expression in buildings such as the New York Central Railroad Terminal and the Rochester Chamber of Commerce, as well as the period during which Bragdon invented and began using his modernist system of projective ornament.

By examining Bragdon's key buildings, writings, and designs, this book reconstructs a forgotten alternative within the organicist tradition, highlighting the variety of ways American architects used "nature" to negotiate the tension between industrial social realities and democratic political ideals.

It recovers the significance of ornament as a terrain within which American modernists confronted challenges posed to architecture's traditional materials, techniques, and civic role by the new media, technologies, and audiences of mass society.

Bragdon's work is important in its own right as a modernist architectural language that for a few years symbolized for mass audiences the progressive potential of modernity. It is also valuable for the new perspectives it opens onto the work of other twentieth-century architects. Bragdon's reworking of organic architecture did not merely make him Rochester's leading architect. It also reverberated back in Chicago and other midwestern cities, shaping the work of other progressive architects in Bragdon's generation and the next. Bragdon's ideas about the social value of ornament were developed in dialogue with those of Irving K. Pond, and they shaped Pond's treatise *The Meaning of Architecture* (1918). Projective ornament, and the four-dimensional cosmology that shaped it, made its way into the designs of William Gray Purcell and George Grant Elmslie, Minneapolis architects who had worked for Wright and Sullivan, respectively. It even left traces in Sullivan's own *System of Architectural Ornament* (1924), which reaffirmed the individualist core of his design philosophy while incorporating elements of Bragdon's more up-to-date rhetoric. As we have already seen, Bragdon's writing and work also stimulated Wright to clarify his differences with other modernist approaches, including those of the emerging international style. Knowing how Bragdon appropriated and transformed Sullivan's organicist ideals, we can better understand Wright's philosophy of organic architecture as one among several interpretations of Sullivan's legacy, coexisting and competing with others that took divergent stances toward such issues as individualism, regionalism, and folk traditions.

Bragdon's relevance for subsequent generations is even greater. During his second career in New York during the 1920s and 1930s, Bragdon became a prominent practitioner of the modernist "new stagecraft" movement and shaped the ideas of younger artists and writers, ranging from painters in the circle around Bragdon's friend Alfred Stieglitz to the novelists Anaïs Nin and Henry Miller. Bragdon's criticism introduced the young Lewis Mumford to progressive architecture, leading to a relationship that helped Mumford develop the argument of *Sticks and Stones* (1924) and subsequent books, while his essays and books on the fourth dimension of space inspired stage designer and industrial designer Norman Bel Geddes to incorporate four-dimensional figures into designs for the New York World's Fair in 1939.

Bragdon's greatest legacy, though, may have been the role he played in stimulating R. Buckminster Fuller to develop his "dymaxion" philosophy and designs from the late 1920s forward. Bragdon repaid his debt to midwestern progressivism in 1928 when the young Fuller, working out of his Chicago apartment near the Lake Michigan waterfront, drew on Bragdon's four-dimensional cosmology and system of ornament to generate his 4D House and first treatise, *4D Time Lock* (1928). Fuller has long been considered an outsider to architecture, his dymaxion designs and geodesic constructions sometimes taken for pure structure free of ornament. Yet Fuller's concept of the fourth dimension, the key to his innovative work, incorporated ideas he had absorbed from reading Bragdon's articles and books. His adoption of triangular geometry as the primary basis for his designs, meanwhile, reflected not only the triangle's structural properties but also the rhetorical capacity of regular geometry to express mystical and communitarian ideals, as demonstrated by projective ornament. Fuller's pursuit of social harmony through geometrically integrated architecture extrapolated Bragdon's use of geometry for sumptuary purposes into a program for transforming industrial society.<sup>20</sup>

Recognizing Bragdon's alternative modernism is as valuable for contemporary architecture as it is for historical scholarship. The challenge of balancing self-interest with larger social goals to form democratic consensus about matters of public concern is no less urgent today than it was in the Progressive Era. The disorganized globalization resulting from the rapid expansion of democratic governance and market economies since 1989 has made the problem of mediating between universal ideals and local realities only more pressing. New production techniques, meanwhile, have undone the modern equation of economy with standardization, permitting a proliferation of varied forms and patterns in everything from shoes to buildings, landscapes, and cities. After a period during which many architects emphasized architecture's autonomy—its independence from everyday life, consumer culture, and even the other arts—architects are today avidly engaging commerce, design, and electronic media. They are increasingly attentive to the capacity of ornament and pattern to engage consumers, respond systematically to local contingencies, and connect architecture with the many visual media that address the audiences of mass society. Riemann space, meanwhile, is enjoying a renewed currency both in physics, where it underlies string theory, and in architecture, where theorists have resurrected it as a way of modeling the modalities of power in capitalist society. Reintegrating Bragdon into our picture of modernism will help restore an urgently needed complexity to our understanding of how architecture contributes to social transformation. 