Chicago Underground

Garry Wills

While Chicago has long been known as the “City of the Big Shoulders,” what has mattered from the outset is that it has had a brain on those shoulders: a technological and commercial mind and a reforming, even a socially creative, intellect.

October 21, 1993 issue

Reviewed:

Nature's Metropolis: Chicago and the Great West
by William Cronon
Norton, 530 pp., $27.50

Perfect Cities: Chicago's Utopias of 1893
by James Gilbert
University of Chicago Press, 279 pp., $13.95 (paper)

Constructing Chicago
by Daniel Bluestone
Yale University Press, 235 pp., $25.00 (paper)

Louis H. Sullivan: A System of Architectural Ornament Inc., 986 Woodland Avenue, Plainfield, NJ 07006, 908-757-4700; (fax) 908-756-4133. Discount available for booksellers.)
foreword by John Zukowsky and Susan Glover Godlewski, essay by Lauren S Weingarden
Rizzoli / The Art Institute of Chicago, 159 pp., $110.00 (Copies of this book are only available from Roy P. Jensen,

– See Less

1.

In the spring of 1992, maintenance crews in Chicago found that a mysterious flood was filling the downtown area’s extensive system of subbasements. There had been no rains to cause this, no rise in the Chicago River. Local columnist Mike Royko said Lake Michigan must have sprung a leak—and, sure enough, fish were soon spotted in the rising waters. Vulnerable underground electric cables and control panels were sputtering out. Thousands of tons of water were breaking through partitions, threatening the foundations of historic buildings. Even when the source of the water was found, the mystery was not dispelled. A puncture had occurred in an abandoned network of delivery tunnels, in the part that runs under the Chicago River. The river was coursing all through and under the downtown, through fifty miles of these labyrinthine conduits. Most Chicagoans had never heard of the tunnels, and even those who had were vague about their origin and purpose.

The builders of the tunnels had wanted it that way. They gave limited and misleading accounts of their purpose while wresting building permits from a suspicious (and venal) city government.

[1] Chicago was slow to develop subways, in part because of a high water table and recurring problems with sewage. Lake Michigan has a mushy shoreline here. The first skyscrapers had to be built on concrete “floating rafts” inserted in the ground to hold the buildings up.

[2]

On the other hand, it was necessary to put some traffic underground by 1900 (when the tunnels were begun), since the congestion of the city streets had reduced walking to a form of slow-motion wrestling. By 1893, two people a day were being killed in the city by trains going through crowded crossings—and many more were maimed, prompting one dire vision of a city filling up with armless or legless people, their extremities sheared off in the insistent shove of trains through acres of human traffic jams.

The grade crossings were still being closed by hand at that time, and the bridges over the Chicago River were being turned by men stationed to let masted ships go through. Crowds huddled into a kind of human cheese. The hero of Theodore Dreiser's novel *The Titan* (1914) sees this human jelly and decides he can become master of the city if he threads trolleys through it, sorting the people out and speeding them along. He fights for tunnel rights under the river. His sense of power comes from literal manipulation of people, from his ability to remake Chicago, inch by inch, at its center:

> Before the newspapers or the public could suitably protest, crowds of men were at work day and night in the business heart of the city, their flaring torches and resounding hammers making a fitful bedlamic world of that region; they were laying the first great cable loop and repairing the La Salle Street tunnel (Chapter 26).

Dreiser's hero is based on the financier Charles Yerkes, who helped take Chicago from horse-trolleys to cable-pulled cars to electric trains and elevateds, advancing new technologies by buying off the corrupt politicians of the 1890s.

[3] Yerkes first opposed "the EI," since it would compete with his control of surface trains; but he had to join in the obvious solution to competition on the ground—divert some of the traffic upward, over the street.

The other obvious solution was to get it under the street; but fears about the buildings, shakily rooted in Chicago's mud, made that an unpopular idea.

How, then, did the mysterious tunnels of the 1992 flood get a city franchise in 1899? By bribes, of course—that was how all business was done. But also by lies. The developers claimed they were only laying cable for a telephone company, to get poles and service wagons out of the overhead congestion.

By the time the city's inspectors got around to reporting on these "cable tunnels," dug at night so people would not notice the amount of dirt being smuggled away from the scene, they found that the tunnels were almost thirteen feet high, and track was being laid (supposedly to carry out the dirt in mining cars). The builders' obvious goal was to sneak a subway system under Chicago before the city knew what was happening. Public reaction put the franchise in danger; so the builders cut their tunnels' height down, to under seven feet—they claimed their workers needed head-clearance to lay, patrol, and repair the telephone cables.

The developers still wanted to work their way up to transporting people; but they began with freight service to department stores whose basements reached down to their tunnels. The rails hauled coal and ashes, they took mail from the post offices and department stores. Though constantly blocked in their efforts to heighten the tunnels, the owners came up with many ingenious uses for their underground system. The tunnels were used to pipe steam heat into stores from giant boiler rooms. In the summer, the chilly air from forty feet below the surface was pushed up into theaters to air condition them. The connection with the grand old Chicago Theater still exists, and popcorn odors wafted through the tunnels right up to the day of the flood.

Hyping the tunnels became a challenge for Chicago's public relations firms. Mae West was given a tour and pictured saying, "Come down and see me sometime." The track junction under "the world's busiest corner" had signs posted "Madison and State," for people to be photographed at. When tourists help up traffic below, a fake "Madison and State" was created solely for photographic purposes. Tourists could not tell *where* they were, in the maze of turns and crossings, once they were underground. Deception was the very air these tunnels breathed.

Much of Chicago's history could be traced in relation to these tunnels, which were not entirely abandoned till the end of the 1950s, after half a century of semiclandestine service. When the Field Museum on the lake-front was opened in 1921, a special spur was created to get coal to it. Marshall Field, who had first threatened to sue the tunnels for mucking around near his building's foundations, later became an enthusiastic customer—the tunnels carried his mail orders to postal stations.

The tunnels were created in a risky environment, like all of Chicago. The blue clay from which they were carved was so easily worked that men dug twelve feet a night, using no tools fancier than scooping knives. The clay taken up was used to extend Grant Park into the lake. Give and take between land and water was always going on, and one could not at first be sure which was which. Emerson, visiting the town in 1853, complained that "if we step off the street, we go up to the shoulders, perhaps, in mud." Sewage put in this porous soup just floated back up. Late in the 1850s, the city came up with the typically bold (if partly mad) expedient of laying sewer pipes on the surface and jacking the buildings up above their height. A famous lithograph of the time shows hundreds of men turning winches to raise the Briggs House while patrons on the hotel's balconies look down.

[4] This literal "upgrading" of the town went on for two decades, and its last phase is still evident in Pilsen, the former Polish section, where some buildings, instead of being raised, just opened a new ground entrance on what had been their second floor.

If the land was too mushy, in the nineteenth century, so was the lake. The Chicago River ran into the lake, pushing silt out at its mouth, keeping ships from their docks. A little more applied madness provided the solution: turn the river around. Make it flow backward. By deepening the Illinois and Michigan Canal in 1871, engineers deflected the Chicago River into the Illinois River,

letting Lake Michigan's overspill shove the Chicago's waters downstate. (A second advantage of this was to send pollution from the stockyards out of the immediate area.)

Chicago, in short, made itself up as it went along. The whole place is artifice. Older geography books used to speak of the site—at the base of Lake Michigan, at the mouth of the Chicago River, on a rich plain—as the natural junction point for shipping, trains, grain, livestock, and timber. It is the first of many merits in William Cronon's *Nature's Metropolis* to shred that illusion beyond recovery. The city was an act of will, a *défi*, an imposition, a triumph over circumstance. There was nothing "natural" about it. (Cronon's title is ironic.) The site was bad in almost all respects. It was a place where stubbornness was its own reward, where entrepreneurs liked to think they had made everything around them—even made the land, even made the water. The weird thing is that much of that boast was true. Cronon explains brilliantly how the city used breakthrough technologies to capture timber, grain, and livestock which did not flow, of themselves, to this odd site, any more than the population did.

In 1860, what would soon become the nation's "Second City" in population was still tied for the title of eighth city. St. Louis, at the center of the Midwest's water system, was the obvious choice to become the rail center as well. Chicago, which had remade its site, set about to remake the national map in its own favor. Grain, the great product of the Midwest, had been processed out of St. Louis, which had rivers feeding into it for barge traffic, and a long riverfront for the clumsy transfer of those grain sacks that were the units of trade. In 1850, St. Louis handled twice the grain Chicago did. But Chicago had a stationary river front on which it could build the big grain elevators, with steam-driven lifts, just invented for loading trains. St. Louis, with a Mississippi forever eating at its shoreline, had no similar site.

To get grain out of labeled sacks into loose streams, Chicago had to invent the machines and the grading and inspection system that made grain a literally fluid commodity. This technological-regulatory breakthrough let Chicago shoot ahead of St. Louis overnight. By 1857, it cost only half a penny to move a bushel of grain through Chicago, as opposed to seven cents per bushel in St. Louis. Trading on receipts for the grain in Chicago's vast elevators made the city control grain trade and speculation. The famous fire of 1871 affected the rail and elevator links hardly at all—though it did give the city a chance to house its national institutions, the Board of Trade and the Stock Exchange, in handsome buildings.

The excitement of the world's grain pouring out of the rich midwestern breadbasket through Chicago is what makes Frank Norris's *The Pit* (1903) such a gripping novel. The book's heroine, Laura—first glimpsed at the opera, where she is rapturous over the music—catches a deep pulse running through the audience as men whisper about the fortunes being made and lost, that minute, down the street at the Board of Trade. The grain trader shoves troubadours and tenors out of Laura's giddy head, to be replaced by her

Napoleonic master of the world's grain. The trading pit, in which all this energy was harnessed, translated the liquid gold of grain into the golden liquidity of cash (and back again):

> It was as if the Wheat, Nourisher of the Nations, as it rolled gigantic and majestic in a vast flood from West to East, here, like a Niagara finding its flow impeded, burst suddenly into the appalling fury of the Maëlstrom, into the chaotic spasm of a world-force, a primeval energy, blood-brother of the earthquake and glacier, raging and wrathful that its power should be braved by some pinch of human spawn that dared raise barriers across its courses (Chapter 3).

The hero, now Laura's husband, corners the wheat market; but at the novel's climax, the overproduction caused by his high prices comes flooding against his holdings. The physical stuff, the wheat itself, moves toward Chicago, making his paper wheattokens valueless.

> And all the while above the din upon the floor, above the tramplings and the shoutings in the Pit, there seemed to thrill and swell that appalling roar of the Wheat itself coming in, coming on like a tidal wave, bursting through, dashing barriers aside, rolling like a measureless, almighty river, from the farms of Iowa and the ranches of California, on to the East—to the bakeshops and hungry mouths of Europe (Chapter 10).

5

The powerful imagery of the novel comes from the technological breakthroughs that shook grain out of sacks and turned it into an endless rivulet, flowing uphill into elevators (like the reversed current of the Chicago River). In the elevators, grain was sorted and stored by grade, to be released in controlled showers from different holding areas. It was as if the horizontal streams of human traffic that had been sorted out and channeled by Dreiser's Titan were turned into a vertical traffic pattern for floods of wheat.

2.

Chicago's manifest materialism came from the fact that the physical stuff of its wealth moved visibly through it, wrought upon, wrestled into submission. That was true of the timber yards in the early days, of the grains processed and traded, of the steel mills later on, and of products like the McCormick Reaper or Pullman cars. But it was most palpably, most pungently, evident in the Stockyards. Pigs and cattle flowed into Chicago as continuously as the grain that had raised them. The channeled streams running toward the butcher were called "rivers of death" by Upton Sinclair in *The Jungle* (1906). This ceaseless flow was handled with such dispatch because Chicago had again stolen a technological march on a rival. Until the Civil War, Cincinnati had been the nation's hog-killer, known as Porkopolis.

But Chicago used the railroads in a new way, creating ice cars that made it feasible to slaughter and ship year-round, not just in winter. This sustained use of equipment made capital investment in machines possible. Just as the steam

engine hoisted grain up elevators, it snatched pigs into the air and sent them flying down a “disassembly line” where machines stripped away bristles, dipped the carcasses, and moved them to chopping-blocks. The handling of cattle was more cumbersome, though the steam machinery allowed one gang to process eighty or more in an hour. The animal had to be stunned with a hammer before it could be lifted by its leg. It was not killed until it was hanging on the steam hoist, so the blood would drain quickly. One expert lunge killed the swinging beast and drained all its blood.

6

Rows of men hacked parts away as, later, other rows would snap parts onto Ford automobiles. Hams slid down one shoot, pork another, forequarters another. Blood was sluiced off, small parts shunted to the processors of fertilizer. Gravity brought down as pork the pigs who had toiled up a ramp to be snatched by one leg onto the moving chains of mechanism. It was, said Sinclair, “pork-making by applied mathematics.” The fascination with the Stockyards came from the fact that nowhere else was the paradox of Chicago more apparent, the union of muscle and mind, of visceral rending and technological refinement. The physical processes of money making were displayed before Chicagoans as in a laboratory demonstration. When Max Weber visited the town in 1904, he compared it to “a man whose skin has been peeled off and whose entrails one sees at work.”

7

Presiding over all this grunting activity was the first dense cluster of tall buildings to rise on American soil. Since the fire of 1871 did not destroy Chicago’s infrastructure or the activities that generated its wealth, capital could be thrown immediately into building a new downtown, using the techniques that made new heights possible—elevators, fireproof materials, steel frames. The impact of these huddled uprights, standing between the perfectly flat lake and the perfectly flat plain, was dizzying in the 1890s. Those who traveled to Chicago by train repeatedly registered the shock of entering a man-made world that seemed in defiant counterpoise to nature.

8 The jammed streets, soaring façades, and dense smoke seemed menacing, overpowering, enough to break the spirits of Midwesterners used to endless vistas, bright skies, small towns, and farms.

The panic of these heights is registered in the classic Chicago novels. The towered Board of Trade seems like a vast machine of Fate to the heroine of *The Pit.* Dreiser’s Titan moves through an “excavated and scaffolded world” resembling some dark vision of Piranesi. The thirteen-story medical building in Robert Herrick’s *The Web of Life* (1900) is “knife-edged” as a scalpel, and as heartless. But the most despairing look at the skyscrapers is Henry Fuller’s *The Cliff-Dwellers* (1893), which revolves around the Clifton Building, its eighteen stories, ten elevators, and 4,000 daily inhabitants—a whole city block with tiered internal hierarchies of offices, agencies, shops, restaurants.

[9] Constructed, like most of these early tall buildings, around a court that filters light down through its core, the building allows people to watch other offices across the court, as in some entrepreneurial Panopticon.

> People rank and score each other by the perch they have reached in this monkey-bar world of clambering ambition. Among the most powerful inhabitants are the architects, real-estate agents, and promoters who create the squalid world over which the Clifton rises in sterile isolation. The workers' houses, which still exist in the mud from which downtown Chicago jacked itself up, are laid out and peddled from the cushy offices of the Clifton. (In *The Jungle*, the hero's child drowns in one of the mudfreshets running down the streets "back of the Yards.") Like Dreiser in *The Titan* (but earlier than Dreiser), Fuller modeled one of his cliff-dwelling businessmen on Charles Yerkes—Erastus Brainard, "unrivaled in his mastery of the street-car question."

The descent from the upper levels of the Clifton returns business failures to the grime and filth of the streets—that is the horror of the Clifton. But the doctor-hero of Herrick's *The Web of Life* chooses the muddy flats of the South Side, where he can minister to real needs, over the hygienic clinics of the skyscraper where neurotic rich people are cared for. The very technology of the new medical building is resented by the hero for its soulless mechanical operation:

> As he stepped into the corridor, one of the young women clerks was filling in an appointment slip on the long roll that hung on a metal cylinder. This was an improved device, something like a cash register machine, that printed off the name opposite a certain hour that was permanently printed on the slip. The hours of the office day were divided into five-minute periods, but, as two assisting physicians were constantly in attendance beside Sommers, the allotted time for each patient was about fifteen minutes (Chapter 13).

The reduction of tasks to a minimum of expended time, by virtue of assemblyline division of labor, makes this treatment of porcine capitalists echo, satirically, the rationalized slaughtering of hogs. As the pig-innards descend from tier to tier over at the yards, so do the patients work their way down to the end of their process on the lower floor.

> Even the prescriptions were formularized to such an extent that most of them were stencilled and went by numbers. The clerk at the end of the corridors handed the patient a little card, on which was printed No. 3033, No. 3127, etc., as he circled by in the last turn of the office. There was an apothecary store on the floor below, where the patient could sit in an easy-chair and read the papers while the prescription called for by his number was being fetched by an elegant young woman (Chapter 13).

Dr. Sommers, Herrick's idealistic character who treats poor people out by the railroad yards, stumbles into the Pullman strike riots and ends up living in a little mock Greek temple, the flimsy structure used as a ticket office in the preceding year's Columbian Exposition. Since the exposition's fairyland of

plaster (staff) structures was burnt in the year of the strike, its grounds become Herrick's symbol of dreams gone up in smoke during the Great Depression of the Nineties. The exposition landscape, carved so exquisitely by Frederick Olmsted into gondola lagoons and reflecting basins, has gone back to formless swamp and bog. Even the early ambiguity of the lakeshore is made to serve the plot, as the hero and his lover ice-skate through the Columbian ruins out onto the lake, which grinds and booms as dark waters shift beneath its ice, foretelling the lover's death in a bitter Chicago winter.

3.

The impresario of the Columbian Exposition, architect Daniel Burnham, is a character in Fuller's *Cliff-Dwellers*—the handsome designer Atwater, who lets assistants do his actual drawings while he brings in expensive commissions. Burnham, famous because of his plan for Chicago's development (1909), has long been a villain of the Chicago story, pilloried for his role in the exposition by Frank Lloyd Wright, Louis Sullivan, and a long line of architectural historians. According to them, Burnham betrayed the native genius of Chicago's steel-structured modernity by calling in architects who created a beaux-art never-never-land, a "White City" of wedding-cake buildings that fed a false historical ideal into the City Beautiful movement and—in Sullivan's phrase—set back American architecture by half a century at least. Siegfried Giedeon is one of many who accepted Sullivan's view of the exposition: "Only Louis Sullivan had sufficient inner strength to hold fast in the midst of a general surrender."

[10] The French fripperies of the fair killed the authentically American "Chicago School."

But there was always something hollow about Louis Sullivan's indictment of the fair. His own contribution to it—the Transportation Building—was structurally retrograde, though it had one of his spectacularly ornate semi-circular entrances. He used a basilica form for his exhibition hall; but the columns hampered the deployment and inspection of the large equipment on display.

The space-intensive post-and-beam construction was also, as several observers have since noticed, rather reactionary for its time in this situation. Sullivan did not employ the lightweight metal-and-glass roof that by the 1890s was commonplace in train sheds and exhibition and market halls. Cantilevers or vaulting would have cleared the way for a vast, open interior.

[11]

Sullivan did not begin his attacks on the fair until 1900. And what did Sullivan expect Burnham to erect—another cluster of Chicago skyscrapers? Burnham was putting together an international exhibition, with national resources (half the architects came from New York or Boston). Beauxarts neoclassicism was already an American style, as one can see by works already

completed or in progress—the Library of Congress, the Boston Public Library. The claim that the Columbian Exposition foisted a new and false ideal on the nation cannot survive critical inspection.

12

Besides, the Chicago School that Burnham is supposed to have betrayed has also been misread by its own admirers. Though the classic Chicago novelists found the 1890s buildings cold and technological, men like Carl Condit, the best-known champion of the Chicago School of Architecture, praise them for just those qualities. Stripped down, functional, revealing their structure, these buildings have often been presented as forerunners of Bauhaus modernism. Yet it is hard to experience these qualities when one looks at the well-preserved specimens in the modern downtown—The Rookery (1888), the Auditorium (1889), the Carson Pirie Scott (originally Schlesinger and Mayer) store (1899). Far from revealing their structure, they hide it in heavily rusticated bases, ornate attic punctuations, surfaces elaborately patterned. It takes a heroic selectivity for Condit to stand before the beaded and braided richness of John Wellborn Root's Rookery and admire primarily the "subordination of detail to mass and structure…a sure and powerful revelation of its pier-and-lintel and pier-and-arch construction."

13 In fact, the granite blocks and columns of the base are load-bearing and only in the rear elevations and the court can iron supports be seen. The building's exterior makes its impact by the daringly plastic treatment of its red granite façade—playing off polished against roughened surfaces, receding against convex forms, whimsy against regularity.

Though Louis Sullivan learned, late in life, to use the rhetoric of form following function, he never abandoned classical tripartism in his elevations —base, columns (between window bays), capital. All these hide rather than reveal the steel frame structure.

14 It is true that steel frames made it possible to turn more wall space over to windows, and the Chicago buildings gulp light wherever possible—in courtyards and skylights as well as through "ribbon windows" and convex hexagonal window complexes. The smoky sky of a coal-burning Chicago made people pant for any opening toward the sun or the lake. But the builders' ideal was not one of bare function. They inclined, rather, to ornate decoration, as Daniel Bluestone has forcefully argued in his revisionist book, *Constructing Chicago*.

The mystery is that these grandiose buildings—the old Public Library (1897), now the Cultural Center, is another surviving example, with its glowing interior of mosaics and Tiffany skylights—could have been treated, for so long, as mainly bare and functional. To solve that mystery, we have first to ask why some people thought of them as cold structures from the outset. Consider this bit of dialogue from *The Cliff-Dwellers*:

> That's all a building is nowadays—one mass of pipes, pulleys, wires, tubes, shafts, chutes, and what not, running through an iron cage of from fourteen to twenty stages (Chapter 7).

But we should remember who says this—Atwater, the Burnham character in the novel, who sees his work as different. Yet others describe the tall buildings as machine-like in their technology—the doctor, for instance, in *The Web of Life.* When we look at the lavish exteriors of these buildings, we may wonder why they had this impact. But contemporary reactions were based less on the exterior of the skyscrapers than on the experience of travel through their interior. And the new element in that travel was the elevator. This novelty is what made going to a fifteenth or twentieth story feasible. Arriving at one's vertical destination by elevator became as important a way of "discovering" these buildings as the horizontal train ride into Chicago was for forming an impression of the city as a whole. Elevator rides are important in the Chicago novels. A new etiquette was formed on the basis of random encounters, whose cordiality was calibrated by status. On the one hand, anyone could ride with his or her boss for several floors. On the other, one could be snubbed or ignored. The doctor in Herrick's novel knows the medical profession has turned against him by the chilly air of his colleagues in the elevator.

> The sense of being in a technological cage came in large part from being pulled by cable up to "impossible" heights. It was not like being swept into the air by one's leg, which was the pigs' way up in *their* tenement house; but neither was it like walking past office fronts or climbing a floor or two. A visitor to the fair noted that the ferris wheel moved with "the upward jerk of the passenger elevator."

15 Although some of the finest ornamentation of the skyscrapers was devoted to the elevator grills and booths, the fact that one was in a cage inside a chute could not be disguised. This went along with other technological gadgets for communicating between distant floors—chutes, pneumatic tubes, call bells, central telephone switchboards, electrical wiring.

16 These technological inventions dazzled people. Even today, many visitors to Jefferson's Monticello take away impressions weighted toward his gimmicks—door mechanisms, copying tools—rather than the classical forms of the structure itself. In the same way, structure is over-looked in favor of mechanical furnishings in some of the Chicago School buildings. But the structure was more elegant than functional in its external form.

> This has been obscured because of a fundamental misreading of the ethos of Chicago. It was felt that, to express Chicago, the buildings had to be forceful bordering on brutal. Chicago, unlike Paris or Florence, is never addressed as "she." It is usually described as demonstratively male—all shove and muscle and brawling. Nelson Algren called the place his "boy," not his girl. The town is anatomically top heavy—Sandburg's City of The Big Shoulders, Algren's "heavy-shouldered laugher." In *The Pit*, we look up at "hump-shouldered grain elevators" (Chapter 2). In the *Cliff Dwellers* we "climb to the shoulder" of the Clifton (Chapter 1). In William Payne's novel *Jerry the Dreamer*, buildings "shoulder up above the common pack."

17 At first Sinclair's hero in *The Jungle* feels at home in Chicago because "my back is broad" (Chapter 2). The restaurant at the Chicago Historical Society is called the Big Shoulders Cafe. This place has shoulders on the brain.

Since the businessmen driving Chicago's commercial life were so often considered raw western brutes, their buildings, it was felt, must reflect a nononsense commercialism. Culture was something for women, who are constantly reading Ruskin in the Chicago novels. The buildings must somehow have a phallic thrust skyward. These sexual assumptions are so profound that Louis Sullivan's biographer Robert Twombly even traces Sullivan's commercial failure to his lack of a thoroughly male nature. According to Twombly, Sullivan talked of form and function, with a swagger, in order to cover up his mincing love of "female" ornament.

18

It is true that Sullivan loved ornament, and was a genius at fusing geometrical and vegetative patterns, as we can see from the fine facsimile edition of his *A System of Architectural Ornament* edited by architectural curators at the Art Institute. It is also true that he took much of his sense of vegetative form from Ruskin's work. But Sullivan was not alone in this. Other members of his arts club, The Cliff Dwellers (still in existence above Orchestra Hall), were Ruskin readers.

19 In fact, the businessmen treated as cultureless boors in the Chicago novels were, many of them, members of the arts clubs. Most of them were not "raw westerners" but people from devout families in the East, with spiritual yearnings as well as financial cupidity. When the mystically inclined Sullivan became interested in Emanuel Swedenborg, he found that his friend John Root was already there before him—as was Daniel Burnham, who came from a Swedenborgean family and conducted prayer services in his home. 20 More conventional religiosity drew many of Chicago's businessmen to Dwight Moody's evangelical mission. James Gilbert has discovered a fascinating and telling coincidence about Chicago's community leaders in the 1890s—at least ten of the most prominent were born in the 1830s in the "burned over" district of New York known for its religious enthusiasms. In *Perfect Cities: Chicago's Utopias of 1893*, he traces the element of millennial perfectionism in their projects.

Gilbert singles out for special study three "perfect cities" in Chicago—the 1893 fair, Pullman village, and the Moody Bible Institute. But there were many others. Pullman was not alone in trying to create a hygienic workers' world. Philip Armour tried to assemble various elements of one in his Armour Mission, Armour Academy, and Armour Institute. Jane Addams's Hull House was a living experiment created in a thirteen-building complex. Turlington Harvey, the timber king, created a teetotal town (Harvey, Illinois), to rescue people from the alcoholic wife-beating that plays a large part in novels like *The Web of Life*. Harvey was also important in establishing the urban havens of the Young Men's Christian Association. Burnham's Chicago plan was an attempt to turn the whole city into an ideal community.

Gilbert goes a long way toward breaking down the simple contrast between the "real" Chicago of the blackened skyscrapers and the "visionary" White City of the fair. The same men stood behind both, and were trying to express similar ideals. But the full integration of Chicago's aspirations is appreciated best by Bluestone in *Constructing Chicago*. He sees that the men who built the city's churches, parks, and theaters also built the skyscrapers, usually with

some kind of new community in mind. That was true even of the office buildings; but we should not let the Chicago novels force us to think only of offices. Buildings of many stories were created for department stores, auditoriums, synagogues—and, in all of them, ornament (or, to put it more broadly and accurately, symbols) had an important role to play. Most of them had grandiose entries—at first built up of nonstructural classical elements (porticos, triumphal arches, columns, and pediments). These were not "functional" in Condit's sense, though they had a social function. People were now to be escorted through the main door into a large lobby before banks of elevators (half-a-dozen to a dozen of them).

The rhythm of one's engagement with the building and its occupants was entirely different from that of the old walk-up stores and offices, where one toiled singly up stairs. Several entries and scattered stair-sites were desirable in those structures. In the new buildings, one traveled together with others, waiting in the lobby, seeking information from the attendants, riding with strangers or acquaintances in the new intimacy of the elevator car. The entry impressed on one the dignity of this undertaking, the altered civic environment inside the new technological community.

It was Sullivan's genius to create a whole new decorative scheme for these communities. His semi-circular archways with filigree incisions were massive yet delicate. The ironwork foliage under which we pass into the current Carson Pirie Scott department store tells us we are entering an enchanted forest that is somehow "modern." Condit looked up with relief from these lower encrustations, as from the blotchy marks of some disease, to the clean lines of the upper stories. But even their current appearance is deceptive. The windows are deeply inset, to allow for the rich ornamenting of the reveals (the visible depth of the wall at each window) and to affix half-recessed awnings. The awning at each window, now gone, gave the upper levels a "clothed" look at odds with the bareness Condit admires.

21

The great doors of the store opened into a projecting vestibule (restored in 1979) whose curved mahogany fittings distinguished the store from the marble normally used in office buildings. The interior decorations—of lamps, grills, heating vents, column capitals, banisters, restaurant furnishings—made the store as through-composed (*durchkomponiert*) as a Renny Mackintosh tea room or a Frank Lloyd Wright house.

22 In the Auditorium Building (now Roosevelt University), Sullivan lavished the same care on hotel, lecture hall, restaurant, bar, and the brilliant design of the vast theater, supported by the acoustic wonders his partner, Dankmar Adler, performed in assembly spaces large and small. The auditorium theater, where the heroines in Chicago novels regularly go to the opera, had four sunburst arches thrown over the audience, each thick with electric lights still new to theater-goers. The arches were nonstructural, made of hollow wood to resonate the famous Adler sound. 23

> Twombly thinks Sullivan, with his female ornament, felt out of place in the "male world of architecture."

24 But Root and Burnham were also interested in ornamental and coloristic effects. We have already considered the rich façade of Root's Rookery. The building's interior has a delicate vestibule of filigree work. It plays off a receding grand stairway against a projecting "wishbone" stair that leads to the helical stair tower running up the interior court of the building. All this is done in ornamental cast iron—which some might say is an "honest" use of structural elements to decorate. But what is one to make of the fact that the building's owners wanted even *more* ornament? In 1909, Frank Lloyd Wright was commissioned to hide girders in sheaths of marble, with incised gold floral decorations in the marble. His low pillars and horizontal marble casings give the vestibule a more intimate look, and the modern restoration has included his changes. By the standards of Siegfried Giedeon, these casings are as "dishonest" as the white façades of the exposition. Yet Giedeon thinks Wright was true to the functional tenets of the Chicago School.

> The truth is that the whole attempt to make Chicago's architects celebrants of raw power is a delusion, another symptom of Big-Shouldersism, an example of sterile gender-typing. Chicago is neither male nor female. The firm of Burnham and Root had its studio on the top floor of the Rookery. A famous picture of the two partners shows them seated in the firm's library, under a large cast of the Venus de Milo (the same cast Wright had in the entry way to his Oak Park house)—does that make their town female? These architects were scholars and cosmopolites, not the "westerners" celebrated by those who want Chicago to give off barbaric yawps.

25

Root was a sympathetic confidant of his sister-in-law Harriet Monroe, the founder-editor of *Poetry*—in fact, she wrote the first biography of Root. The Chicago architects thought they were building cultural complexes, not mere business centers, when they put up their tall buildings (some of which provided roof gardens for music and refreshments). Burnham encouraged others to provide the kind of amenities attached to his own studio—not only a library but a steam room and a gymnasium (where he taught younger members of the firm how to fence). A grasp of what they intended will break down the simplistic contrasts that have been drawn between the downtown of Chicago and the White City of the 1894 Exposition. Once misconceptions are dispelled, Burnham's ecological vision of a city inhaling serenity from its long lake-front reveals its continuing importance.

That vision has been called elitist, and it did not of itself dispel the horrors of a Chicago growing so fast that its jammed neighborhoods were at times the human equivalent of its live-stock pens. Chicago has had its full share of atrocities and enormities—reaction to the Haymarket Riot, or the Saint Valentine's "massacre," or the splitting of the atom at the University of Chicago's Stagg Field. But it is time to give up on barroom mysticisms about this "male city"—all those shoulders on the brain. What mattered is that Chicago had, from the outset, a brain on its shoulders. It was primarily a technological and commercial mind, but also a reforming, even a socially creative, intellect. Though people have talked mainly about brawn, the brain was always there, and still is. ■

Garry Wills

Garry Wills, a journalist and historian, is the author of numerous books, including *Nixon Agonistes* (1970), *Inventing America* (1978), *Explaining America: The Federalist* (1981), and *Lincoln at Gettysburg* (1993), which won a Pulitzer Prize that year. His most recent book is *What the Qur'an Meant: And Why It Matters* (2017). (November 2019)

1. Surprisingly little has been written about these tunnels, though Upton Sinclair made the hero of his novel *The Jungle* work briefly in them and suffer an accident there. After the flood, Bruce Moffot's 1982 study in an interurban series had to be rushed back into print: *Forty Feet Below, The Story of Chicago's Freight Tunnels* (Interurban Press of Glendale, California). At the 1968 Democratic National Convention, Cook County sheriff Joe Woods (brother to Nixon's secretary, Rose Mary) proposed incarcerating arrested "hippies" in the tunnels. (See *Chicago History*, December 1992, p. 28.) ↩

2. See Donald Hoffmann, *The Architecture of John Wellborn Root* (University of Chicago Press, 1973), pp. 24–26, 68, 164. This may be the best overall introduction to the Chicago School of Architects. ↩

3. For Yerkes's street trains, see Louise Bessie Pierce, *A History of Chicago*, Vol. 3 (Knopf, 1940), pp. 216–218. For his purchase of politicians, see Ray Ginser, *Altgeld's America* (Funk and Wagnalls Co., 1958), pp. 106–112. ↩

4. Harold M. Meyer and Richard C. Wade, *Chicago: Growth of a Metropolis* (University of Chicago Press, 1969), pp. 94–96. Two of the most skilled house raisers of this period were George and Albert Pullman, who had been apprenticed to their father, a house mover along the path of the Erie Canal. George went on to be the manufacturer of Pullman railroad cars and the founder of the workers' village named for himself. See Lison E. Leyendecker, *Palace Car Prince* (University Press of Colorado, 1991), pp. 13–35. ↩

5. The "Leiter corner" on wheat, which gave Norris his novel's climax, was actually broken by the meatpacking king Philip Armour, who hired special trains, ships, and Lake Michigan ice-breakers to rush wheat into Chicago. See Harper Leech and John Charles Carroll, *Armour and His Times* (D. Appleton-Century, 1938), pp. 305–320. ↩

6. The process is described well by Dominic A. Pacyga, *Polish Immigrants and Industrial Chicago* (Ohio State University Press, 1991), pp. 48–52. ↩

7. I take the Weber quote from Carl Smith's excellent book, *Chicago and The American Literary Imagination, 1880–1920* (University of Chicago Press, 1984), p. 158. ↩

8. Carl Smith in *Chicago and the American Literary Imagination* shows how regular was the topos of a train ride over flat distances ending in a disorienting tangle of structures for which no one could be adequately

prepared (pp. 107–120). ↩

9. The Clifton is based on the ten-story Home Insurance Building (1884), William Le Baron Jenney's building, the first "skyscraper" to use an iron-and-steel frame. See Bernard R. Bowron, Jr., *Henry B. Fuller of Chicago* (Greenwood, 1974), p. 129. ↩

10. Siegfried Giedeon, *Space, Time, and Architecture* (Cambridge University Press, 1967), p. 395. See also Lewis Mumford, *The Brown Decades* (Harcourt Brace, 1931), pp. 141–148, and Frank Lloyd Wright's autobiography, in *Collected Writings*, Volume 2, edited by Bruce Brooks Pfeifter (Rizzoli, 1982), p. 188. ↩

11. Robert Twombly, *Louis Sullivan: His Life and Work* (University of Chicago Press, 1986). See also two articles in Volume 26 (1967) of the *Journal of the Society of Architectural Historians.* David H. Crook, "Louis Sullivan and the Golden Doorway," especially p. 257, and Dimitri Tselos, "The Chicago Fair and the Myth of the 'Lost Cause,'" especially pp. 263–265. ↩

12. There is a balanced discussion of the whole question in William H. Wilson, *The City Beautiful Movement* (Johns Hopkins University Press, 1989), Chapter 3. The desperate attempt to preserve Sullivan's view of the fair reaches a kind of comic nadir in Ross Miller's interpretation of the Transportation Building: "The tarted-up entry to a functional [sic] loft was Sullivan's enervated protest of the fair's dominant neoclassicism." Miller, *American Apocalypse: The Great Fire and The Myth of Chicago* (University of Chicago Press, 1990), p. 165. Sullivan erected similarly "tarted up" entries where no protest could have been intended—e.g., the great entry arch to the Stock Exchange, now preserved at the Art Institute. ↩

13. Condit, *The Chicago School of Architecture* (University of Chicago Press, 1964), p. 65. The Rookery was the most fashionable office building in the 1890s. Dreiser's Titan goes there for a key encounter in the novel. Norris's hero in *The Pit* has his office there. The building was spectacularly restored in 1989–1992 by the Baldwin Development Company. The building ideas of the 1890s are best studied there. For the building's French antecedents, see Meredith L. Clausen, "Paris of the 1880s and the Rookery," in *Chicago Architecture, 1872–1922*, edited by John Zukowsky (Art Institute of Chicago, 1987). ↩

14. See James F. O'Gorman, *Three American Architects: Richardson, Sullivan, and Wright, 1865–1915* (University of Chicago Press, 1991), pp. 98–106. ↩

15. Cited by Miller, *American Apocalypse*, pp. 238–239. The ride in an elevator was so novel when these buildings went up that some people expected to pay for the trip. ↩

16. The Monadnock building (1889), which is still in use, "was the first office building to include electric wiring in its original specifications," according to Harold L. Platt, *The Electric City: Energy and The Growth*

of the Chicago Area, 1880–1930 (University of Chicago Press, 1991), p. 38. People were also astounded at the large janitorial and engineering staffs that maintained the bathrooms on each floor of the skyscraper, the centralized steam heat, the electric services. The ability to reconfigure offices by moving nonload-bearing partitions also kept alive the reality of life in a steel case structure. ↩

17. Cited in Miller, *American Apocalypse*, p. 187. ↩

18. Robert Twombly, *Louis Sullivan, His Life and Work*, pp. 356–358, 399–402. Twombly considers Sullivan a repressed homosexual, fascinated by Walt Whitman, whose late marriage (he was 42, the bride 20) was unsuccessful. The relevance of this to his buildings is the unsatisfactory part of Twombly's analysis. ↩

19. See the essay by Lauren S. Weingarden in *Louis H. Sullivan: A System of Architectural Ornament*, pp. 18–20, 40–41. ↩

20. See Twombly, *Louis Sullivan*, p.400, and Thomas S. Hines, *Burnham of Chicago* (University of Chicago Press, 1979), p. 135. ↩

21. See Joseph Siry, *Carson-Pirie-Scott: Louis Sullivan and The Chicago Department Store* (University of Chicago Press, 1988), pp. 223–234. Siry stresses the sensuous aspect of the terracotta surfacing on the upper floors, which would have been emphasized by the texture and polychrome touches of the awnings. ↩

22. Siry has wonderful detail photographs of the fittings of the store, on pages 200–218. ↩

23. The Republican National Convention was held in the Auditorium's theater space in 1888. It may have been the one time delegates could actually hear each other. See Charles E. Gregersen, *Dankmar Adler: His Theatres and Auditoriums* (Ohio University Press, 1990), p. 71 and plate 66. ↩

24. Twombly, *Louis Sullivan*, p. 402. ↩

25. The "western" architects were mainly from the East and had been schooled there or abroad—Sullivan at MIT and the Ecole des Beaux-Arts, Root in England and New York University, Burnham at a prep school in Massachusetts. Adler, the son of a rabbi, was born in Germany. All these men had scholarly aspirations—reflected in the journal they supported, *The Inland Architect*. ↩