

Winged Victories

The soaring ambition of Santiago Calatrava.

by [Rebecca Mead](#) September 1, 2008, New Yorker Magazine



Calatrava does not work with a computer; each of his buildings begins with sketches in watercolor. Photograph by Ethan Levitas.

Santiago Calatrava, the Spanish architect, speaks six languages, and although his English is less than perfect, its wrinkles only heighten the allure of his pronouncements. “Though I love the arts with all my heart—paintings, sculpture, theatre, and music—and think they are among the biggest achievements we humans can do, I am really convinced that architecture is among the most important,” he declared one evening last March, at a cocktail-hour gathering in the wood-panelled ballroom of the Harold Pratt House, the Park Avenue mansion that is home to the Council on Foreign Relations. Calatrava, who has a low voice and a professorial manner, was dressed in a dark suit and wore glasses with the narrowest of metal rims. He stood next to an overhead projector, upon which lay brushes, a box of watercolor paints, and two weights of paper that had been supplied in advance by an aide.

“You can penetrate architecture, you can enter into it,” he continued. “This room is part of *ourselves* in this moment. I think it is important to build for people, and to deliver this message of hope: through good construction and a certain sense of progression, a better understanding of each other can be achieved. All those things, in modesty, are what I have tried to convey.” Calatrava turned to the box of paints. “I thought it better to draw than to speak,” he said, as he dipped a brush into a glass of water and began sketching a slender green leaf and a snail’s shell, which were displayed on two screens flanking him.

The images drew appreciative chuckles from the audience: each shape could, with only a limited exercise of imagination, be seen expressed in the structure of the Chicago Spire, a building designed by Calatrava, which the event was intended to promote. At present little more than a construction site with an attractive street address—400 North Lake Shore Drive—the Chicago Spire is to be a silvery, faceted tower spiralling from the bank of Lake Michigan to a delicately tapered point, with Calatrava attending to the smallest ornamental details, including bronze door handles cast in the shape of leotard-clad dancers. Before Calatrava took the podium, the guests had the chance to listen to a sales representative for the building's twelve hundred luxury apartments—"From the observation deck you can see the curvature of the earth," she claimed, seductively if implausibly—and viewed digital renderings of the Spire's torqued, glittering form, which looked less like a place to live than like a drill bit from a tool kit produced by Cartier.

Calatrava, who, at fifty-seven, has thick, dark hair that is barely touched by silver, took a second sheet of paper. With a few brushstrokes, he sketched the tapering outline of his building as seen at some distance, added a strip of green to evoke Chicago's waterfront, a wash of blue to suggest the lake, and some brownish blocks to stand in for the rest of the city's skyline. The result looked like an illustration from a children's book—an effect that was enhanced when Calatrava put into the foreground a park bench and two seated figures gazing at the Spire. "What has finally been important to us is not so much the idea of the building as the idea of the persons watching the building, and also those inside living in harmony with the natural world," Calatrava said, as, with a flourish, he added the crowning, naïve touch: a distant bird in flight.

For Calatrava, who is one of the world's most successful architects, sketching with watercolors is an essential part of his creative process. He does not work with a computer or with drafting equipment; each of his buildings begins with a sheaf of paint-dappled pages. His archive in Switzerland includes more than a hundred thousand sketches; he has also had copies of them bound into handsome keepsake books for his clients, a beguilingly artisanal alternative to a PowerPoint presentation.

Calatrava typically paints images—a leaping figure, a charging bull, a disembodied eye, a skeletal hand—that at first seem to have nothing to do with buildings but, rather, suggest the contents of the sketchbook of an art student who has spent the afternoon at MOMA lingering over the Picassos. The relevance of such drawings becomes fully apparent in Calatrava's completed structures, which are instantly recognizable for their use of sculptural forms that draw upon motifs found in the natural world. A station for the airport at Lyon-Saint Exupéry has sand-colored concrete wings with black steel struts, raised aloft, as if the building were a bird of prey alighting on the ground with its latest capture. A transportation hub in Lisbon has dozens of uprushing white steel columns topped with a canopy of striated, faceted glass that evokes a forest of tropical palms. The first completed Calatrava skyscraper, the Turning Torso tower, in Malmö, Sweden, which is fifty-four stories high and twists through ninety degrees, was derived from a sculpture that Calatrava first made in 1985, and this, in turn, was prompted by his sketches of the human spine. (Similar studies lay behind 80 South Street, an apartment tower that Calatrava proposed in 2004 for downtown Manhattan, consisting of twelve glassy, cube-shaped town houses airily stacked one atop another, with apparent disregard for gravity. That project has stalled for lack of investors.) Calatrava's bridges, for which he initially earned his fame, often evoke the shapes of lithe human forms, bending or lunging with Olympian vigor. Though he

does not like to describe his work as having been inspired by nature—he is fond of quoting Rodin, who said that inspiration does not exist—the connection has been made by the developers marketing his buildings. The sales slogan for the Chicago Spire is “Inspired by Nature, Imagined by Calatrava.”

Calatrava has made sketching in public another signature move. In Dallas, where two Calatrava bridges are being built, he pulled out the watercolors after lunch at the home of Margaret McDermott, a local philanthropist who contributed two million dollars to the project. (“He reached into his briefcase and dipped a brush into his water glass,” Mary McDermott Cook, McDermott’s daughter, recalled of the occasion. “My mother said, ‘Get him another glass of water!’”) In Liège, Belgium, Calatrava was one of seven contestants in an architectural competition to design a high-speed-train station. His rivals came in teams, armed with examples of their past work; Calatrava showed up alone, with his paintbrush, and won the commission. In January, 2004, while presenting his proposal for a new PATH transit hub for the World Trade Center site, Calatrava drew in chalk a child releasing a bird from her hands, thus conveying the genesis of the design, in which a pair of glass-and-steel canopies would arch over the sidewalks of lower Manhattan, like outstretched wings.

Calatrava has been trained both in architecture and in engineering, but he thinks of himself as an artist, and it is as such that he has been embraced by his most enthusiastic champions. Three years ago, the Metropolitan Museum presented a show of Calatrava’s sculpture and architectural models; it was the largest exhibition the Met had ever devoted to a living architect. The show’s curator, Gary Tinterow, says of Calatrava, “When he approaches a project, he begins to think about it in terms of form. Then he refines the form, as he adapts it to the function at hand.” Joseph Seymour, the executive director of the Port Authority at the time Calatrava was selected for the PATH-station project, has said, “He’s the da Vinci of our time.”

“My personality is more the personality of a painter,” Calatrava told me a few months ago, when I met him in his New York office. (He has lived in the city since 2005.) “I would like to be an artist who works in a very closed ambience,” he continued. “In order to solve the kind of problems I have to solve, I have to work in myself, and with myself.”

And yet Calatrava rarely finds seclusion. He shuttles constantly between New York, where he has a staff of about thirty-five, and Europe, where he has a staff of a hundred: half in Zurich and half in his home town of Valencia. Demands are made on his time by clients across the globe. In Tenerife, he has built a waterfront concert hall that looks like a shell topped with a ram’s horn; in Buenos Aires, he has created a cable-strung footbridge that, spectacularly, pivots from its transverse position to a position parallel to the bank, to permit the passage of water traffic.

Calatrava is unafraid of the big emotional gesture. At the official ground-breaking of his PATH station, in 2005, he enlisted his daughter, Sofia, then age ten, to release over the site what were officially billed as a pair of doves, in order to insure the comprehension of his architectural conceit. (They were actually white homing pigeons, a more reliable bird for ceremonial purposes.) In comparison with the work of his architectural peers, Calatrava’s buildings appeal more to the heart than to the head. For all their structural complexity, they do not enjoy the playful indeterminacy of Frank Gehry, the cerebral audacity of Rem Koolhaas, or the

mathematical austerity of Zaha Hadid. But, at their best, his buildings inspire visceral awe rather than thoughtful appraisal, and deliver the uplifting impact of a cathedral, even when their purpose is merely to shelter commuters.

To generate this sense of transcendence is precisely Calatrava's intention. "To do simple things is very difficult," he says. In spite of the earnestness of his buildings, though, Calatrava is not without a personal capacity for irony. Having delivered his remarks at the sales event for the Chicago Spire, he noted, as he laid down his brush, "The most beautiful part of this is that the building is already under construction."

Calatrava does not always travel in a private jet, but there are times when the convenience offered by a Cessna of one's own outweighs all other considerations. Such an occasion presented itself on a wet April afternoon in Zurich, when Calatrava set off to show me one of his designs, the high-speed-train station in Liège, which is nearing completion.

As Calatrava hustled across the rainy tarmac of the airport and boarded a seven-seater provided by NetJets—an aviation time-share company—he did so with weary relief. That morning, he had flown in on Lufthansa's red-eye from Qatar, where he had been exploring a site for a proposed photography museum. He had intended to return a day earlier, but the Emir had requested that he stay on another night, and the comic indignities of commercial travel were fresh in his mind. He had made a rushed connection at dawn in Frankfurt, where a security agent insisted that he jettison a half-used bottle of cologne that was in violation of antiterrorism regulations. "I said, 'Look, it's almost empty,' but it made no difference," Calatrava recalled, shaking his head as he switched off his iPhone, placed it on the polished ledge at his elbow, and sank into the buttery taupe leather of his seat.

Calatrava began his career in Zurich, where he studied civil engineering; he was thirty-two when he won his first big competition, to design the Stadelhofen commuter station, an open, airy structure made of steel and concrete that on one side leans into the cleft of a hillside and on the other opens into a city square. More recently, he built a library for the University of Zurich's law school—an ovoid structure topped with a glass oculus—that fits snugly within the courtyard of the school's existing hundred-year-old building. A visitor standing inside the splendid skylit atrium will see no books or students; the workspaces are hidden behind five levels of pearwood-clad balconies, as if the library were a beehive in which all honey-producing activity had been cunningly concealed. The oculus is equipped with a brise-soleil that silently opens and closes according to the available daylight, and the library is so popular that even students not enrolled in the law school have taken to working there.

Calatrava has long been interested in incorporating movement into his architecture; his Ph.D. thesis was concerned with the foldability of three-dimensional structures. Movement, he argues, is an essential part of the natural world and of human life, and is profoundly related to our experience of time. "Even if people want to do monuments that are timeless, like the pyramids of Egypt—well, they are moving," he says. "We don't see that, because they move very slowly, but they are now shorter than when they were built. The stones are falling down. Everything in our universe moves." His earliest studies for moving buildings begin in the model shop of his office in Zurich. When I visited, a model-maker was working on a piece that was about seven feet tall

and resembled a stack of thirty-odd pizza boxes, like the detritus of a frat party. At the flip of a switch, the sides of the stack undulated woozily, as if viewed through the eyes of a drunken reveller.

Calatrava's office is in a smart residential district in Zurich, in the former home of a well-to-do brewer; the engineers who help solve the structural challenges of his inspirations occupy what were probably once the bedrooms, while the architects who convert his sketches into formal plans are stationed in a ground-floor room with an enormous plate-glass window that overlooks an unadorned green lawn edged with a loggia. Calatrava lives in a handsome villa a few steps from the shore of Lake Zurich. Its reception rooms are largely dedicated to displaying his sculpture, although, in a concession to the demands of domestic life, Calatrava has also incorporated cube-shaped cantilevered cabinets that seem to float inches from the walls, to serve as storage for glassware handblown in Murano.

"Zurich is for me a place to retire," Calatrava told me in his studio, on the top floor of his house, where he paints amid the treetops while listening to classical music. "Another architect might have a very busy practice in New York, and have a studio in the country where he goes for a week from time to time to concentrate. My life here is a bit like that." (Actually, he recently bought a country house outside New York as well.) Calatrava thinks of himself as a man of modest tastes, and is pleased that his suits, handmade for him in France, still fit him ten years after their manufacture. "Believe me, my home in Zurich—it could also be much smaller, and the way I live is not very different from someone who lives in a one-room apartment," he told me. "I need a good shower in the morning, and I need a good bed to sleep in—that is all." He did admit, though, that one of the villa's charms is its proximity to Saint Moritz, where he has been skiing for thirty years.

Thirty-two years ago, while studying engineering in Zurich and living in an actual one-bedroom apartment, Calatrava met his wife, the former Robertina Marangoni, who grew up in Sweden, where her father was a businessman, and who was studying law in Switzerland. (The Calatravas speak to each other principally in German, his fifth language and her second.) Tina, who runs the Calatrava business, supported her husband throughout his education and in the early years of his practice, before it turned into a lucrative occupation. "I was very fortunate to marry my wife," Calatrava says. "I could not get a better one. She has been working very diligently, protecting me."

"I helped from the beginning, going to the post office and paying bills," says Robertina, who raised the couple's four children in Zurich and Paris while her husband consolidated his practice. (Rafael, twenty-nine, is a lawyer in Valencia; Gabriel, twenty-five, is studying civil engineering at Columbia University, where the Calatravas have endowed a chair; Micael, twenty-four, will attend Columbia's business school in the fall; Sofia, fourteen, attends the Lycée Français in New York.) Tina is Calatrava's closest professional and personal adviser. "I left my friends behind me in Europe, and the same with Santiago," she says. "Perhaps we are strange." Her husband, she says, "is a hard worker. To be as good as he is, you have to be a hard worker. He gets up at four in the morning, because he has to work with Europe. He has no hobbies, like playing golf. He works the whole day, in a very concentrated way."

The Calatrava family is extremely close-knit, occupying a compound of three adjacent town houses on Park Avenue. One house contains the office, which is equipped with glass-and-cast-bronze desks and tables of Calatrava's design, and the same leaping-dancer door handles that he is providing for the Chicago Spire. Another of the houses is divided into sleek, almost identical bachelor pads for the Calatrava sons, designed by Gabriel Calatrava without oversight by Calatrava senior. The third town house is the main family home, and has been renovated to Calatrava's specifications, with ample room to display his art works on the lower level and, according to his wife, inadequate closet space upstairs. "When it comes to designing interior spaces, he's a guy," Gabriel Calatrava says.

The family spends summers in Zurich, which the rest of the year also serves as a convenient central location for Calatrava's various European projects, such as the train station in Liège. After Calatrava's private jet landed in Belgium, he headed off to meet Vincent Bourlard, the managing director of Euro-Liège TGV, a subsidiary of the Belgian national railway company that has overseen the commission and creation of the station, which has been under development for the past eleven years. Calatrava's station is expected to help transform Liège, a former mining town, by turning it into the natural way station between Brussels, in the west, and Cologne, in the east, joining Liège to the growing network of high-speed trains all over Europe.

A station, Calatrava believes, should be a grand gateway to a city, like the Gothic stone gates of his native Valencia, built in the fourteenth and fifteenth centuries to impress upon the rest of Europe the city's status as a trading power. "If you conceive these buildings with a purely functionalistic point of view, they easily become obsolete," he told me. "In Zurich, they made a kind of shopping mall in front of the main station. Nobody wants to shop there. The place that, twenty years ago, everyone thought was very beautiful, today everybody says is a place where they never want to go. People don't even want to traverse through, and in the night it is insecure, because there is no grandeur. They just wanted to take advantage of the poor fellow whose train arrives in the city to go to his job—to sell him a piece of bread, or a tomato, or a juice, or a beer." Calatrava has built more than ten stations so far in his career. "You go into Grand Central and you immediately understand that this has been done for you: it is a gift to everyone, it is a gift to the city," he told me. "I understand the problem of the person who cannot eat because he has no money; I understand how tragic is the person who is homeless. Because of that, I like doing stations, because they are the home of everybody, and because you are providing a beautiful moment in the life of people who work so hard. I am not a food producer; I am not a doctor; I am an architect, and I use my work for a sense of philanthropy, and not for any glory. This is a Stoic concept: to stay in the middle, which permits you to be free from the ambitions of the high, and permits you, through your liberty, to deliver something to those who don't have anything."

Calatrava arrived in Liège as evening was falling, and so, before going to observe the progress that had been made on his station since the last time he was there, a few weeks earlier, he and Bourlard went straight to dinner at a contemporary Italian restaurant set in a pretty courtyard garden. "I adore Calatrava," Bourlard said emphatically, as he ordered the first bottle of wine. "I went to New York to see the exhibition at the Met, and I saw a big banner that read, 'Van Gogh, Calatrava.' I said, 'Who is this van Gogh?' " As dinner was served, Bourlard, who had a shock of white hair and wore his glasses perched on the end of his nose, as if he were perpetually ready

to examine a blueprint, recalled Calatrava's original presentation before the jury that was established to select an architect. "My former professor of philosophy at the university was on the jury, and he said something terrible," Bourlard told me. "Close your ears, Santiago. He said, 'He's half a genius, but I only ask myself whether his victims will survive him.' "

Calatrava responded, genially, "But, look, he's still alive."

At about ten-thirty, Bourlard said, "Now let's go and see the station!" Calatrava, who has never learned to drive, climbed into a waiting car, and a few minutes later it pulled up in front of an enormous steel structure. Like most of Calatrava's buildings, the station has been painted white, a color that he favors in part because it evokes the whitewashed buildings found in his native Mediterranean region, and also because white was adopted by northern-European modernists in the twentieth century. Open to the city on both sides, the station in Liège was covered with an expansive roof, now only half glazed, that undulated like a single, irresistible wave, about to drench the surrounding streets.

The curve of the roof mimicked the curve of the hill against which the station is set, and Calatrava explained to me that he wanted to connect the upper part of the city—where there is a park, and also apartment buildings and houses—with the lower part, which lies in front of the station and leads down to the Meuse River, a few blocks to the south. At one point, early in the station's planning, Euro-Liège had considered building a canal in order to link the station with the river—a vaporetto service for commuters, like that in Venice, was also proposed—but the logistics proved impossible. Instead, Calatrava mapped out an avenue leading to the river, in a space now filled with narrow houses and disused warehouses. Eventually, there will be plantings and a reflecting pool—Calatrava loves the doubling effect created by reflecting pools—but at the time of our visit all that lay in front of the station was a muddy forecourt, across which Calatrava picked his way in tooled-leather shoes.

Bourlard, who had loosened his tie and was smoking a cigarillo, entered the lower level of the station and led the way beneath the platforms, while his architect hung back in modesty. "I'm going to show you the most beautiful parking lot in the whole of Western Europe," Bourlard said, striding into the bowels of the station, underneath the driveway that connected the passenger concourse to the hillside. It was, indeed, a remarkable space in which to deposit a car, with sixty-five thousand square feet divided by concrete ribs that each resembled a modified L, rather like the angle of a wire coat hanger's shoulder. (This is one of Calatrava's favored forms, and is an abstraction of the space between an extended thumb and index finger, derived from his watercolor studies of the human hand.) Next, Bourlard walked to the foot of a staircase leading to the platform level. "Here's the nave of the cathedral," he said, gesturing toward the vaulted roof. Even in the murk of a construction site by night, the ecclesiastical metaphor was deserved, with the stairs that ascended under Calatrava's ribbed roof evoking a vision of Jacob's ladder while simultaneously suggesting the experience of Jonah after ingestion by the whale.

Calatrava was born just outside Valencia, the unplanned but much cherished youngest of four children. (His name is that of a twelfth-century order of knights.) His father, like his grandfather, had a business exporting fruits and vegetables to countries in northern Europe, and, as a child, Calatrava divided his time between his parents' home and that of a childless aunt and uncle, who

owned a farm. “My father was very much inclined to art, and I remember being very small and travelling with him to Madrid to see the Prado,” Calatrava says. “Through my father I learned the fact that people can be very clever and do very good business, but being an artist is a superior thing.”

Calatrava’s father died when he was thirteen, and the family business was taken over by an older brother, while the young Santiago continued his education. In 1968, he went to Paris to attend the École des Beaux-Arts, only to find that it was shuttered, owing to student unrest. “I spent the best summer of my life in Paris,” Calatrava says. “When you are sixteen years old, nothing is disappointing.” He returned to Valencia in the fall to study art, but within a year he had switched to architecture. “I remember being in a shop buying brushes, and there was a booklet there on Le Corbusier,” he says. “It convinced me that you could do beautiful things with architecture. Le Corbusier was also a painter, and he had done beautiful sculptures, so this changed my orientation a bit.” Calatrava cites Le Corbusier as an important influence on his work, particularly the swoopy chapel that the Swiss-born architect designed for Ronchamp, in France.

Another important influence, he says, was the Gothic architecture of Valencia, especially the city’s Silk Exchange, whose trading hall has eight intricately twisting columns ascending to a ribbed, vaulted ceiling, like the Chicago Spire reflected in a hall of mirrors. Calatrava is fond of comparing himself to the forgotten artisans who erected the Silk Exchange. “ ‘Architect’ comes from the Greek, and means ‘the one who commands the workers,’ ” he says. “The name of the architect gets forgotten. I learned this very early: that the day before the opening you are responsible for everything, and the day after the opening you are nobody. That is part of the job: you have to take your bag and your tools and go and build something else.”

Today’s top architects, including Calatrava, are hardly anonymous: the real-estate trade press in New York refers to the prospective PATH terminal at the World Trade Center as “Calatrava Station.” But the well-documented Bilbao effect, in which a city in decline is revived by the construction of an architecturally significant museum or other public building, assumes a principle that Calatrava professes to disdain. “*I am not a brand. This is a brand,*” he told me one day, pointing to his watch, a Patek Philippe. (It was the “Calatrava” model, first manufactured in 1932. Calatrava owns three of them, all gifts from his children.) Although his designs might strike some as flashy, he insists that the sites on which he is asked to build—often marginal, formerly industrial districts—demand forceful architectural statements. “In Liège, there is still prostitution at night in that corner of the city, and drugs,” he said. “My station in Lisbon is in the old oil refinery. When you work in those places, you have to do very strong gestures. If you make a shy building, no one will go there.”

Still, Calatrava’s reliable delivery of structures that are anything but shy has given his clients exceptional marketing tools. In the case of his most significant completed project in North America, an addition to the Milwaukee Art Museum, this is exactly what the client sought. “We were looking for something fairly dramatic,” Russell Bowman, the museum’s former director, explained to me. “We were looking for a building that provided an architectural identity for us.” Hitherto, the museum’s architectural identity had been provided by Eero Saarinen, who, in 1957, completed a sand-colored concrete block with deeply recessed windows, cantilevered over the banks of Lake Michigan. The Saarinen building, to which an extension was added in the

nineteen-seventies, is austere, imposing, and fortresslike. (It also serves as the city's war memorial.) Calatrava's extension, by contrast, is a delight to the eye: a white vaulted pavilion on the water's edge, its ribbed steel-and-glass roof equipped with a massive pair of wings that, weather permitting, stretch, when the museum is open, to the span of a Boeing 747, and fold closed at night. "When it was under construction, we used to joke about its being like the volcano at the Mirage in Las Vegas—that we would have to open and lower the wings at certain times so that people could see it," Bowman told me. That has proved to be the case: in response to popular demand, the wings flap once a day, at noon. Seen from different angles and in different states of openness, the pavilion can look like a ship riding a wave, like a bird in flight, or very like a whale.

"Calatrava understands the relevance of destination architecture," the museum's current director, Daniel Keegan, explained to me over lunch in the Café Calatrava, a ground-floor restaurant in the prow of the pavilion, which, a couple of years ago, was renamed in the architect's honor. ("We called to ask him if we could use his name," Elysia Borowy-Reeder, the senior director of communications, told me. "He said sure. I think he thought it had always been called the Café Calatrava.") The museum, Keegan explained, competes for visitors with other entertainment options, such as theme parks, and the Calatrava pavilion, which charges no entry fee, serves as a lure for the museum's holdings, which include impressive collections of twentieth-century American art. "If we fail to be competitive around the experience, it doesn't really matter what we have," Keegan said. The experience, as orchestrated by Calatrava, includes an underground heated parking lot with arched ribs and skylights which is known in house as the Taj Garage. There is also a store, equipped with handsome, Calatrava-designed cabinetry, where visitors can buy jigsaw puzzles, mugs, book bags, lapel pins, and disks of chocolate, all bearing an image of the pavilion. In a merchandising opportunity not available to institutions with more soberly conceived facilities, the store also offers a flip book that shows the building's wings opening and shutting.

The construction of the pavilion, which was begun in 1997 and completed in 2001, was not without complications. The wings were supposed to be fashioned from a lightweight carbon fibre. When they proved too costly to fabricate, Calatrava had them made in lightweight steel by a company in Spain. They were flown to the States in two giant cargo planes, with less than a month for installation before the building's ceremonial opening. The switch in materials came at some aesthetic cost: the carbon-fibre wings would have withstood winds of up to forty miles an hour, while the steel wings retract automatically when gusts reach twenty-four miles an hour, a not infrequent occurrence on the banks of Lake Michigan. When I visited, one mildly breezy day in June, the wings folded up at eleven-thirty in the morning, ninety minutes after opening, and remained closed throughout the very pleasant afternoon.

Not long ago, Tina Calatrava requested, and received, a letter from the museum stating that the performance of the wings had met expectations, in order to respond to rumors that the building is mechanically less than perfect. (The museum's director of facilities, Charles Loomis, told me that the wings have worked flawlessly, though general maintenance of the building was higher than would have been the case in a more conventional structure. When the roof needs cleaning, window washers must rappel across it, like a SWAT team making an entry to a building besieged by terrorists; and there is one employee whose sole responsibility is to repaint the building,

inside and out, with Trinity Bone, Calatrava's preferred shade of white.) Other critics have suggested that, whatever the quality of the engineering, Calatrava's sculptural pavilion is overblown kitsch. "Fish gotta swim, birds gotta fly, but buildings do not have to move, at least not in the literal and often costly Calatrava manner," Martin Filler wrote, in a survey of Calatrava's work that first appeared in *The New York Review of Books*.

The building was certainly costly: the final tally, including landscaping, was a hundred and thirty million dollars, all of it raised by Milwaukee's philanthropic community. The museum's administrators do not blame Calatrava for the expense of their acquisition, pointing out that his design was so successful as a fund-raising tool that the original plans for a much more modest extension were expanded as additional money became available. "Certainly, the form of the building was dramatic, but that was what we wanted, and that was what we got," Russell Bowman says. Like other Calatrava clients, he speaks of the architect in the kind of language that might be employed by a *seducée* happily disoriented after an encounter with a lover of legendary accomplishment. "He took us to levels that we never imagined," Bowman told me. "The effect of the building in Milwaukee has been to reach levels that we could only have dreamed of."

When Calatrava first unveiled his design for the World Trade Center station, in 2003, it was heralded as a symbolic statement perfectly in keeping with the tenor of the times. The building was equipped with a pair of moving wings and a mechanized roof that could be opened to the air every year on September 11th, in a symbolic gesture that recalls the city's vulnerability as well as its resilience. (It could also open at other times, for ventilation purposes.) "Should we preemptively landmark this?" Robert Tierney, the chairman of the Landmarks Preservation Commission, said at the ceremony.

"The Port Authority was not known for creating fabulous buildings," says Daniel Libeskind, the architect who created the master plan for the new World Trade Center, and whose concept for a "wedge of light"—a public space upon which sunlight would fall every September 11th—was preserved in the positioning of the station. "What is very moving about the design is that it was not just another station," Libeskind says. "It reinforced the idea of the master plan that the whole site should be special."

Calatrava speaks of his client with courtly deference, dwelling on the Port Authority's more inspired projects—the construction of the George Washington Bridge or the Holland Tunnel—rather than on its less impressive contributions to civic architecture, such as the Port Authority Bus Terminal. "When I see the George Washington Bridge, I get tears in my eyes," he told me. His design, Calatrava says, embodies the Port Authority's contribution to the city, and memorializes its loss on September 11th, when eighty-five of its employees perished. "If you are a gardener, you will do it with flowers; but they are builders and engineers, and they would like to build something that not only serves the people but also carries the memory of those who died," he says.

When we met in Zurich, in April, Calatrava compared the effect provided by his station's opening roof to that delivered by the Pantheon. "People go there just to see a bit of the sky of Rome, but, with this opening, it is a universal thing," he told me. Another inspiration was the Hagia Sophia, with its breathtaking, spacious interior, reached by moving through a sequence of

smaller spaces. It is no accident that a station might evoke the atmosphere of a temple, Calatrava says. “The word ‘religion’ comes from the Latin *religare*, meaning ‘creating links,’ ” he explained. “Physically, what a station does is create links with the rest of the world, as do bridges. Look at the George Washington Bridge in the middle of the landscape: it is like a priest opening his hands.”

Although the PATH station’s sculptural form at street level has been its strongest selling point, the station will not, thanks to the surrounding skyscrapers, be visible as an object in the same way that the Milwaukee Art Museum, or many of Calatrava’s other structures, is visible. The popular emphasis on the exterior sculptural qualities of the station is misplaced, Calatrava told me, though he says that he can understand why his over-all plan for the station has been less well comprehended. “It’s like music,” he explained. “People get captured by the melody or by the rhythm, but they don’t go into the essence of the problem. People will whistle the Fifth Symphony of Beethoven. But that is not Beethoven.”

Calatrava’s commitment to the artistic and symbolic statement expressed in the station has, at times, been at odds with the more prosaic needs of his client. “Santiago would be looking for an art form, and we would be looking for services for commuters, and also a source of revenue,” says Joseph Seymour, the former Port Authority head, who retired in November, 2004. Ken Ringler, the executive director of the Port Authority from 2004 until 2007, says, “My view was always, if we have to keep within budget, don’t go and tell Santiago what to do; tell Santiago what is the problem. If you tell him what to do, it will conflict with his artistic desires; but he’s a great problem-solver.” One problem that even Calatrava was unable to solve to his satisfaction was a conflict with the planners for the memorial at the World Trade Center site, across the street from the station. When it emerged that Calatrava’s glass-bottomed reflecting pool, through which light was to have fallen upon the commuters below, trespassed the area reserved for the memorial, he was obliged to delete the pool from his blueprint. “I think it is absurd, but it is not my job to educate people,” he told me. Some of the sublimity of his design would be lost, but, he said, “I think it is like when you are doing a painting. You see some Rembrandt paintings that have unfinished parts.”

This summer, it became clear that Calatrava’s station might never achieve its Rembrandtesque fullness. At the end of June, Chris Ward, the recently appointed head of the Port Authority, issued an unvarnished progress report on the entire World Trade Center site, in which he acknowledged that the station, rather than becoming operational in 2009, as originally projected, would not be completed until much later. Nor, he announced, would the building’s wings move. “This is a tough choice, but it’s the right choice,” Ward said. Instead, Calatrava had substituted a less costly mechanism, whereby a strip of glass panels bisecting the roof could open up on September 11th or on other occasions. “Making this decision helps preserve the over-all iconic nature of Calatrava’s winged design,” Ward explained. In an effort to keep the cost of the project below two and a half billion dollars, changes to the underground mezzanine were being evaluated, including a diminution of public space.

Calatrava cooperated with the Port Authority in laying the groundwork for this sobering announcement, and in mid-August, as his staff was preparing to propose further cost-cutting stratagems to the Port Authority, he told me, “In terms of the users, the project is better now than

it was before.” But in April, as we flew from Liège to Valencia, he had argued that it was wrongheaded to believe that economic belt-tightening calls for a less extravagant architectural statement. “It’s like someone says, ‘I have to save, I must sell my car’—and then you can’t go anywhere,” he said.

“Because this station has a part that is symbolic, people think that is the station, but that is *not* the station,” he continued. “That is just the sign to show people where it is on the street.” The real station, he said, was what lay below street level: the vast mezzanine unobstructed by columns, and lit by natural light filtered from above, bestowing upon the traveller all the grandeur and sense of occasion offered by the great room of Grand Central, with its celestial roof and shafts of sunlight. “They should not build the iconic part,” he insisted, as we flew southward above French clouds. “They should wait another generation, and they should build that which the other generation cannot build. The next generation can build the iconic part, but the platforms, the services, the generous spaces, the sense of arrival—these things they will never be able to move.”

The form that the station eventually takes will be an expression of the city’s priorities, Calatrava told me, and he did not seem convinced that New York would have the self-confidence necessary to hold fast to its vision, and his. “If people say it has to be a small station—well, it’s their station, it’s not my station,” he said. “If they want to have an ordinary underground station and a shopping mall, they will have it. They will get the full measure of their personality. I do not say that New York will get the station it deserves, but it will get the station it wants.”

The fullest articulation of Calatrava’s vision can be found in Valencia, where, for the past seventeen years, he has been engaged in building an eighty-six-acre cultural zone in a dried-up riverbed, in what was formerly an industrial zone. The City of Arts and Sciences, as it is known, includes a glass-walled children’s science museum with a roof edged with spiny spikes, as if it were half stegosaurus, half paper shredder; a domed planetarium that, when doubled in a reflecting pool, resembles a human eye, complete with a sunshade whose mechanics imitate those of an eyelid, albeit with slower functionality; and, the most recently opened addition, an opera house that looks somewhat like the head of a massive prehistoric beetle. Currently under construction is a bridgelike overpass, which has a single four-hundred-foot mast that will be among the tallest structures in the city, and will ease access to the complex.

I visited the City of Arts and Sciences at the tail end of spring, before the city became unbearably humid. Even so, sunlight bounced unforgivingly from the white concrete concourses, upon which Calatrava’s vast white concrete structures lay like bleached, scattered bones. The reflecting pools glared like highly polished mirrors, and skinny cypress trees in planters that had been whimsically sunk in the water provided ornament but no shade.

The effect was oppressively dazzling, and so was the grandiosity of the buildings, which, when seen en masse, seemed to be the unfettered expression of an artistic sensibility enraptured with its own idiosyncratic repertoire. The planetarium’s eyeball loomed, unblinkingly, over a plaza across which groups of schoolchildren scampered. To one side stood the children’s science museum, with its sloping sides of glass and its serrated roof. Owing to the exigencies of local politics and civic planning, the building was designed before it was decided exactly what kind of

museum it would house; and the space, which Calatrava intended to be flooded with natural light, is, in the event, supremely ill-suited to its function, for which it has been divided into multiple darkened areas equipped with interactive video and other pedagogical displays.

Across the plaza lay the opera house, which opened in 2005 and necessitated the creation of a new orchestra, directed by Lorin Maazel. (Calatrava recently dismissed a suggestion that he join the opera's board of directors. "I said, 'I am just a poor craftsman,' " he told me.) The storage and technical rooms had recently flooded, and work was under way to repair the damage. Flooding has been a recurrent problem at the building, and delayed the opening night of the 2007 season. Since then, Calatrava, who has officially been nominated the city's favorite son, has been battling the local government, charging it with paying insufficient attention to his warnings that the landscaping upon which it was insisting would cause runoff into his masterpiece.

The building, which contains four performance spaces, bears Calatrava's hallmarks: the arched, ribbed roof; the filtered natural light. There are a few aesthetic innovations; most notably, the walls of the opera house are clad with shimmering ceramic tiles of the same cobalt blue that can be seen on the roof of a nearby church. Similar blue tiles—which serve an acoustical and also a decorative function—appear on the rear wall of one of the recital halls where Calatrava has installed an enormous ceramic bas-relief of a ring of leaping dancers: his own design, if one that bears a debt of considerable proportions to Matisse. One panel of the piece features the handprint of Calatrava's daughter.

Later that afternoon, I joined Calatrava at his office, on a narrow side street in the old city, and we walked the few blocks to his home, an imposing mansion that is situated on the main square, opposite the cathedral, and that in the nineteenth century served as the headquarters of the city's Fire Department. He unlocked a heavy wooden door, and we passed through a vestibule and into a single enormous white room that had a lofty double-height ceiling and was surrounded by a mezzanine. The entire space was devoted to the display of Calatrava's sculpture. He and Tina had determined that none of his work would enter the open market, and much of it would remain gathered together here, where the interrelatedness of the pieces could be maintained. One day, he explained, the space might become a foundation and a public museum, like that which Joan Miró bequeathed to his home town of Barcelona.

Edging the room was a series of eight abstract, modernist figures in Carrara marble, which, Calatrava explained, was a study in the progression of a curve folding in upon itself; in them, it was possible to see the embryonic suggestion of the curved carapace of his opera house. In the middle of the room stood a number of pedestals, most of them with mirrored tops, upon which were Calatrava's most recent sculptural endeavors: red and black ceramic vases, inverted so that they stood on their necks with the drums of their bases upraised, painted with images culled from Calatrava's sketchbooks of leaping figures, horses, and bulls. Calatrava had made them during his summer vacations in the past four years, firing them in kilns in the nearby town of Manises, a center of pottery-making since the fourteenth century. "I started working every day from six o'clock to seven o'clock, and then I went to do a little sport," he said. "I was working twelve or thirteen hours a day."

We departed for a café on the square, where Calatrava insisted that I sample the local drink, made from tiger nuts; and he explained that he was becoming more interested in incorporating his own art works as ornamental elements into the structures he designs. “Look at this façade,” he said, gesturing toward the arched Gothic doorway to the cathedral opposite, which was embellished with carved figures of saints. “The architecture is support for art,” he said. “In the Renaissance, many buildings were support for paintings. The Sistine Chapel—the architecture is very simple, and they painted inside it. La Cappella degli Scrovegni, in Padua, where Giotto painted.”

Just as the sculptures in Calatrava’s private museum made sense only when grouped together, so his entire oeuvre should be understood as expressing a gradual evolution. “I don’t do big jumps,” he said. “In the moment where you make a big jump, you are copying yourself, or you are copying someone else. It is important to me to work in those steps; to work in sculpture, and to work in ceramics, which nourishes my architecture. Maybe for the critic of art who has his life centered in a grid, who goes from one great architect to another to another to another, from the Bauhaus to the Constructivists, and so on—in this scheme you will not find me, even though I know very well those stories from the history of art. But we have the freedom—and that is what is beautiful—to do whatever you think you should do.”

Calatrava’s success has, finally, provided him with the freedom to defend his art when necessary. A decade ago, he completed a footbridge for the city of Bilbao, which curved, under a sweeping parabolic arch of white steel, from one bank of the river to the other, and was paved with green glass tiles. When, later, some tower blocks, designed by Arata Isozaki, the Japanese architect, were built nearby, Isozaki was also commissioned to add a walkway to the Calatrava bridge, in order to facilitate access to his own development. Last fall, Calatrava accused the city of violating his intellectual-property rights, and initiated a three-million-euro lawsuit for moral damages. (Infuriated, Bilbao’s mayor threatened to reclaim damages for the cost of repairing worn tiles.) Calatrava lost the case, in which his lawyers argued that the bridge should be considered a work of art rather than merely a piece of engineering; but the judgment was sympathetic to his cause, and he is considering an appeal.

“So it costs a little bit,” he told me, as we sat in the early-evening light of the city’s square. “But it is interesting. In 1926, Marcel Duchamp tried to bring in a sculpture of Brancusi, a bird in copper, for an exhibition. When it arrived at customs, the officials said, ‘You have to pay a duty on copper entering this country.’ The organizers of the exhibition said, ‘But this is a piece of art,’ and the customs said, ‘No, this is a piece of copper.’ Brancusi won.” ♦