

## Low-Tech From Cyberspace

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Jean Nouvel and Spanish architect Fermín Vázquez have given Barcelona a new monument. The 144-metre-tall Torre Agbar – with its coloured aluminium panels, 4400 square windows and glass louvres in varying degrees of translucence – is a stylish kaleidoscope.

Although Barcelona is known as a city of architecture, it is not a city of architectonic masterpieces, with the exception of an occasional work, such as those created by Gaudí. Its outstanding reputation is due largely to the Cerdà grid with its obliquely cropped blocks, which generates a unique atmosphere in the city, and to a drive to recover lost ground in the 1980s and '90s, when a raft of new plazas and parks testified to the benefit of design on public space. For the most part, Barcelona is interesting from the perspective of urban design, a fact that may help explain the city's relative lack of tall buildings: the accent lies on the communal and not on the individual. Towers have made little headway, even along the coast, an area that seems inexplicably unpretentious when compared with the *costas* to the north. At 170 metres, the tallest building in Barcelona is the Sagrada Familia, followed by 154-metre-tall twin towers erected in the Olympic Village in 1992. Only two of the city's remaining buildings top the 100-metre mark: the Colón office tower (110 m) and Hotel Princess (109 m). Change is just round the corner, however. A substantial number of high-rise buildings are either in the planning stage or already under construction. New on the scene is the 144-metre-tall Torre Agbar, a design by Jean Nouvel and local outfit b720 that can be called, and rightfully so, a new monument for Barcelona.

One might claim, nonetheless, that a primary function of the Torre Agbar is to influence the urban design of the city. It plays a role in long-awaited plans to develop and extend, all the way to the coast, the famous Avenida Diagonal – the Broadway of Barcelona – which runs transversely across the ordered precision of the urban grid. Even today, the Diagonal ends rather vaguely at the Plaça de Les Glòries Catalanes, where it lends access to major arterial roads to the north. This last remnant of the street had long been hiding behind the disorderly roundabout. Absent is the large-scale axial effect of Cerdà's gridded city. The neighbourhood surrounding this forgotten piece of the Diagonal was becoming, bit by bit, a run-down industrial zone. The situation called for change. At present the area is being redeveloped as a business district for companies representing 'the new economy'. Under construction on the coast, at the far end of the axis, is the Forum, a complex boasting cultural functions and public venues such as Herzog & de Meuron's congress centre, a project completed in 2004.

The story of Torre Agbar begins with this urban-renewal operation. Property developer Layetana commissioned b720 Architects to design a master plan for a parcel of land near Plaça de Les Glòries Catalanes. Architect Fermín Vázquez of b720 recognized the opportunities inherent in realizing a high-rise building on the site in question. 'Keep in mind,' he says, 'that Cerdà envisioned this plaza as the centre of the city.' A tower would mark this important spot, visually link the two sections of the Diagonal, and call attention to the new business district. While Vázquez and his team were brainstorming on the potential of the site, to their surprise and quite by coincidence a client appeared with an interest in building a sizable new main office: Aguas de Barcelona (Agbar), the municipal waterworks and a subsidiary of Odeco, the water division of Suez, a worldwide utilities conglomerate.

This confluence of events nearly led to the absence of b720 from further proceedings. For if the site was to accommodate a genuine office tower, radiating the prestigious image of this somewhat notorious multinational, surely the young and relatively inexperienced firm would have to make way for a big-name architect. The developer – who owned the land and who would build the skyscraper and lease it to Aguas de Barcelona for a minimum of five years (with an option to buy after that) – decided to give the local architects a fair chance. He asked three firms to develop a concept for Agbar's office tower: b720, Renzo Piano and Jean Nouvel. After viewing the presentations, to Vázquez's surprise the client suggested that b720 and Nouvel join forces, with Nouvel as head architect and b720 in a supporting role. It is a role apparently cut out for Vázquez, who is currently working with Nouvel on a project for Madrid's Reina Sofia Museum; with Toyo Ito, commissioned to design two towers near Barcelona Airport; and with David Chipperfield, who is involved in no less than three projects in Spain.

The Agbar project, which took four years to build, was finished in June 2005. The building, which more than lives up to expectations, has planted Barcelona's waterworks firmly on the map. Right up to the last minute, persistent rumours circulated through the streets of the city, including a tale that promised a flow of water trickling down the sides of the building day and night. Such assumptions showed that familiarity with the company, combined with Nouvel's metaphoric description of the project as an erupting geyser and the intriguing appearance of the structure, had made the tower a subject of interest among local citizens.

As befits a symbol of corporate identity, the tower is a unique product. Because of morphologic similarities between the two, the Torre Agbar is spoken of in the same breath as London's Swiss Re tower, realized by Norman Foster in 2004, but a closer inspection of the two nullifies the comparison. The refined perfection of Foster's creation makes it an industrial product. One can imagine an entire park full of these buildings. The office tower erected by Nouvel and b720 is a defiant object that is not logical, not sensible, not repeatable. It looks like a designer's whim imbued with arbitrary choices and individualistic tastes.

The tower has 35 storeys above ground and four subterranean floors. Instead of resting on the ground, it rises from what the architects call a 'crater' containing 50 centimetres of water. In this way, they skilfully skirted the problem of how to merge such a fluid form with the site at ground level. And their choice of words invites us to interpret the immediate surroundings of the tower, a lightly undulating surface of black asphalt, as a lunar landscape of sorts, a suitable setting for a rather otherworldly skyscraper. Beneath the highest slope in this landscape is the dome of an auditorium with an underground connection to the tower.

The floor plan of the Torre Agbar – not circular but slightly oval – has an eccentrically positioned core. Both core and exterior wall are of concrete. Floors spanning the distance between the two are free of columns. The concrete exterior wall rises to the twenty-fifth storey. Starting farther up, on office floors for the managing staff, is the conical top of the skyscraper, which offers a greater degree of spatial spectacle: floors here, which project from the core, feature voids and have fully glazed exterior walls. The 4400 square windows encircling the lower 25 storeys are meant to seem randomly arranged, according to Vázquez. The concrete façade of the tower is clad in aluminium panels of different colours. Wrapping the entire building is a membrane of glass louvres in varying degrees of translucence – some more matte than others and some displaying a

pattern of black dots – tilted at 14 angles (making them appear to be adjustable, which they are not).

All the components that went into treating the façade have a single concerted effect: they blur the image of the tower. The exterior has depth, plays with one's ability to focus, changes colour with every movement. The result is a kind of gobstopper or kaleidoscope, dynamic and animated but not garish. More appropriate adjectives would be 'subtle' and 'stylish'. The blurred effect makes this building, rather self-evidently, an example of the digital age. It's an image made familiar by those images that appear daily on our monitors. For the first time, a realized building may seem to be more a product of cyberspace than the computer-controlled artists' impressions that preceded it.

Fair's fair: the interior has less to offer. Noticeable, for example, is that – owing to the double skin and the relatively small openings in the concrete shell – views are less spectacular than perhaps anticipated. Vázquez points to a singular row of three windows, one beneath the other: 'As a tribute to Gaudí, each storey has an open view from floor to ceiling, precisely on the axis aligned with the Sagrada Familia.' But nowhere have the architects opted for what might have been an interesting deviation from the 90-x-90-centimetre window dimensions.

Also noticeable is the limited height between floors. Apparently unable to increase this height, the architects came up with two less-than-ideal but effective solutions. The first is a purpose-designed ceiling system that gives the lowered ceiling extra overhead space, in the form of recessed areas, wherever possible (between the steel beams that support the floors and the piping and ductwork for mechanical systems). By cladding these recesses with mirrors, the designers added 30 'virtual' centimetres to the height between floors. The second solution takes advantage of the presence of three intermediate storeys for mechanical systems. Reducing the height of these storeys at their junction with exterior walls provided the floor directly below each one with a ceiling high enough at the edge to allow for a strip of extra windows. The three distinctive storeys so created are not only appealing, but also suitable for special functions: cafeteria, restaurant and conference room.

It's hard *not* to interpret the forest of towers now rising in Barcelona, a boom spearheaded by Torre Agbar, as the sign of a new wave of optimism in Spanish architecture, which can be traced to the Bilbao effect. Architecture *works*, and Spaniards know it.

At the same time, the building designed by Nouvel and b720 exemplifies a new generation of European towers. In contrast with its American counterpart, the European tower is characterized by small floor plates, a high degree of symbolism and a relatively high price. Added to this is the current tendency to make skyscrapers more energy-saving through the use of smarter, low-tech technologies. The Torre Agbar, for example, has no air conditioning. The choice of a concrete exterior wall is based on climatic considerations: during the day the bulk of the exterior wall protects the interior from the hot Mediterranean sun. And the outer skin of the building is more than simply a sophisticated sunshade. It also transforms the zone along the exterior wall into an airy, semi-temperature-controlled space. It is now possible for office workers, even those on the twenty-fifth storey 100 metres above the city, to open their windows.

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