



Law Faculty Library at the University of Zürich by Santiago Calatrava

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Can there be an inside without an outside? Caves, underground constructions and interiors inserted into other buildings seem to be examples of such. Then there are more speculative configurations: monads, for example, or the library conceived by Jorge Luis Borges where the notion of Nicholas of Cusa lurks (as it does in Sloterdijk's *Sphären*) of a Being whose periphery is infinite and whose centre is everywhere, which is to say, where there is nothing outside of 'it'. As Borges writes,

The universe (which others call the Library) is composed of an indefinite and perhaps infinite number of hexagonal galleries, with vast air shafts between, surrounded by very low railings. From any of the hexagons one can see, interminably, the upper and lower floors. (Borges 1972: 51)

The Law library by Santiago Calatrava at the University of Zürich is a notable example of an embedded and (for the most part) hidden insertion of a public interior space. It is difficult to understand why the building has not received greater attention. Perhaps, probably, this neglect is due less to a Calatrava-overload than to the absence of an exterior, that is, of a conspicuous thing, object or 'icon'. This library, moreover, owes something to Borges. Calatrava, rephrasing Borges at the building's opening as "I imagine Heaven like a library",¹ we may speculate, had his idea in mind when designing it.

Of the siting, Calatrava deemed it "wonderful to build in the university quarter of Zürich, in this context rich in the tradition of Karl Moser and Gottfried Semper. I have attempted to make something contemporary which corresponds with this historical fabric." The intervention ties in "with the tradition of inner courtyards in the University and ETH" (Calatrava & Buchmann 2004). When asked if it was



Views from ground floor.
Photos: author, 2011



1 "Ich stelle mir den Himmel vor wie eine Bibliothek" (in Renner 2004).

a pity that such a precious work was hidden humbly in a courtyard, scarcely visible from outside, he replied: “When you say ‘humbly’, you’re quite right. This library originated under delicate circumstances, since Herrmann Fietz’s building is under conservation protection. I tackled the project with great respect for the existing structure.” Fietz’s original L-shaped building dates from 1908 and was designed as a chemistry laboratory. Twenty years later, it was complemented with a further addition (lower by two stories), creating a central courtyard. Such constraints led Calatrava to think along Semper’s lines: “I believe I have made a virtue of necessity.” (Calatrava & Buchmann 2004) The solution was to leave the existing building untouched (apart from integrating the disjointed rooflines), building the new library “as a completely independent structure, suspended within the inner courtyard and supported against its walls at just four points” (Calatrava 2004), so that the distinction between old and new is unmistakable.² The separation works both statically and organisationally: since a library can have only one entrance and exit, the professors alone have keys to the connecting doors on each level. The galleries are supported from the two lateral concrete cores and by steel columns on the side, partially integrated with book stacks. A lift (à la John Portman), staircase and access to the building services are located at each end of the galleries.

On entry,³ the gaze is drawn upwards, automatically, inevitably, to the building’s most striking accent, technically and artistically: the lenticular, glazed cupola with hydraulically activated lamella sun-shading. Below it, as if freely suspended in air, hover six elliptical galleries.

Typical of Calatrava, the upper structure draws on natural analogies: the main girder resembles a spine and the individual cantilevered beams are welded to its ribs. This oculus would seem also to bring together primordial metaphors of bodily apertures, including the ungendered: the eye and eyelid. Calatrava’s aperture has an element of intelligent design: it opens and closes to admit or reflect light, letting the building regulate its own climate. A good amount of natural light is provided during the day, with or without shutters, reducing the need for artificial



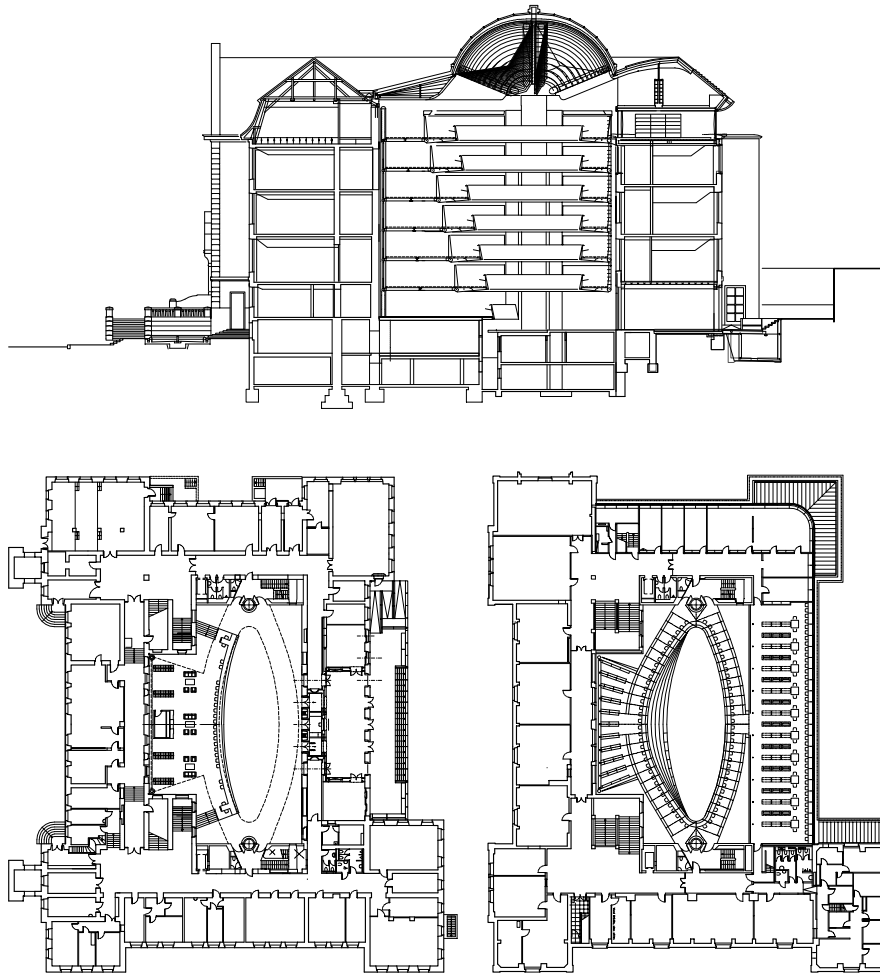
Top: Interstice between library and pre-existing courtyard. Photo: author, 2011
 Right: Top level gallery work stations. Photo: author, 2011



2 The illuminated interstices between the lenticular ‘exterior’ of the library and the orthogonal interior of the former courtyard lead to unpredictable encounters.

3 The new entry to the building is downplayed, as if arrival and departure were irrelevant by comparison with the serene immanence of the interior. In fact, the entry is somewhat counter-intuitive: either the patron walks around the building to the street behind, in order to descend to reception, or winds from the original main entrance through a series of dark and compressed passages to it.

Section and plans (left: level 0; right: level 6)
by Calatrava office. Courtesy Corbin-Hillman
Communications, NY



light and thus lending the space a greater vividness. The passing of the day and the varying light and weather conditions follow almost tangibly.

A thermal stack principle is employed in ventilation: air at four to six degrees warmer than outside concentrates at the cupola and passes out by vents, drawing up fresh air sucked in at the bottom of the building. Fresh air entering the building is modified passively by a heat exchange system connected to ground sensors, 43 of which are installed at a depth of 100 metres to heat or cool the water to about 18°. This then passes through a heat exchanger, which in turn cools or heats air taken from outside. The fresh air is either fed directly into the library or used for the cooling ceilings built into the attic story, maintaining the temperature of a Dantean *Paradiso*.⁴

Expanding upwards in a funnel to the cupola, the galleries accommodate individual reading stations orientated inwards, around the rim of the timber parapets facing the atrium. On all levels up to 500 readers may be seated around it; those on either side, however, are shielded from view while only a few on the opposite side of the building's empty core are visible. Herein, as well as the spiral, stands a key difference from what might be presumed a precedent, Wright's Guggenheim, where a restless procession of circulating spectators is put on display around the central atrium. By contrast, also, in the vastness of Asplund's Stockholm Public Library, attention is drawn to the peripheral enclosure, the cylinder of books.

4 For further technical information, see Strehler and Niederer (2006).

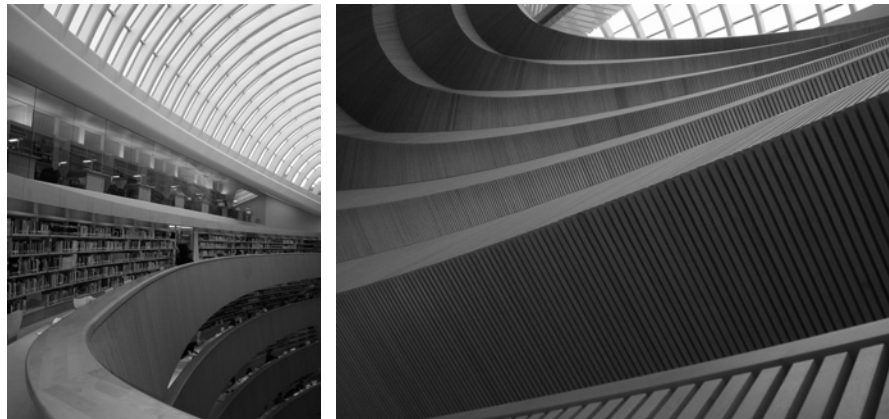


Views at top level. Photos: author, 2011

The book, in the intense silence of reading, is another interior without an exterior. In a university, however, this interiority is part of a larger configuration: the solitary reader is immersed in a collective:

Reading is a linear experience, and an individual one. A library, especially one built for a university, must therefore be a place where the collective experience can give way to solitary reflection. Students and faculty should be able to feel they are part of a shared scholarly enterprise, and small gathering places – *parlatoria* – should be available for discussions. But the library as a whole must be a quiet place, which encourages intimacy between the reader and the book. (Calatrava 2004)

The study areas are closed off at the rear by bookshelves, behind which is another light well bringing daylight into the old part of the building. The book stacks are pushed against the outer perimeter, establishing a simple grid that makes locating books easy while contributing (together with the acoustic baffles formed by the timber slats with their substrate) to the reading areas' quietness.



Top: Gallery workstations. Photo: Thomas Stein, 2007. Flickr

Bottom left: Top level gallery. Photo: author, 2011

Bottom right: Gallery soffits. Photo: Renato Silver, 2007. Flickr



View across interstice to workstations at first half-level. Photo: Thomas Stein, 2007. Flickr

The hovering (levitating, even) character of the interior derives not only from the self-supporting statical configuration of the galleries, but also from the daylight flooding in, reflecting off the white stone of the ground floor, the white-painted steel and the light maple surfaces (Canadian maple for the floors, European for the balustrades and soffits). These finishes combine to produce a warm glow of reflected light between the platforms. The very vacancy of the bottom kindles the desire to ascend.

Calatrava mentions – and seems to enjoy – the paradox that books are heavy but knowledge immaterial, that is (presumably), weightless. He elaborates:

The library floats in the courtyard as if it were an enormous piece of furniture. The library as furniture – this idea was already there in the Renaissance and Baroque. Think of the Medicean Laurenzana in Florence or the Stiftsbibliothek in St. Gallen. (Calatrava & Buchmann 2004)

No, Calatrava's library is not *the* Library of which Borges writes (even an inattentive reader will have noticed from the start): the air shafts are not vast, nor the railings very low at all. The geometry is baroque but the galleries are elliptical, not hexagonal. The floors, above all, are not interminable. But Borges' library, of course, is un-buildable (or already built – infinitely). His is devoted to utter, anonymous, expressionless, silence.⁵ Calatrava has built a cosmological image here, amply, with ease, and with greater anonymity and silence than he has ever achieved before, and maybe since.

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5 See Artis (2002).