

The Architecture of Antoni Gaudí

Summer Session 2020 (Online Zoom)
Matthew Schlueb, Instructor

Lecture 6: Fluid Plasticity (2020.08.03)

parti pris:

Bóvedas Tabicadis: vault partition, forces nearly reduced to loads carried by the lighter material weight of thin brick; **interlocked in herringbone pattern, woven in layers of staggered joints, wide flat surfaces maximizing bond area with cohesive fast setting Plaster of Paris**; building out from corners, successive arcs of bricks fitted in adhering two edges, vaults made without scaffold centering; shallow flat profile acting as a board/partition laid flat, without lateral thrusts or external buttressing; structures shaped by flow of forces, masonry placed to follow thrust lines, in pure compression of static equilibrium without reinforcing steel; supporting tremendous loads with remarkably small amount of material, an incredibly thin profile of two or three layers.

leitmotif:

Fluid Plasticity: freehand is not a ruled line, not a geometric line. Nor an arbitrary line, a random line. It is a line drawn by the hand, a natural line, drawn by nature. Relaxed appearance as if material formed by the elements, rather than man. Away from drawing board, returning to making, working with hands, on forms in space. Models visualized easier, than drawings. **No longer measured by the straight edge, lines became liberated**, sketches, designs become more fluid, sculptural, plastic, living architecture.

“Creation works ceaselessly through man. But man does not create, he discovers.

Those who seek out the laws of Nature as support for their new work collaborate with the Creator.

Those who copy are not collaborators. For this reason, originality consists in returning to the origin.”

manifesto:

Colònia Güell Crypt Convex Vaults (1910-14): inverted vaults, becoming convex, sagging between the supports, defying gravity, defying nature, defying God. The lower church, Crypt, representative of the early Christians, worshiping in hiding, in the catacombs to avoid persecution by the Romans. A new **plasticity, shaped by metaphor to express a feeling, a weighting**, overhead, bulging, oppressing, eliciting a sense of annihilation, rather than elevation. **Form transformed, tradition inverted, originality materialized.**

architecture:

Baker Hall (spiral stair), Rafael Guastavino Jr. (1914) 4909 Frew St, Pittsburgh, PA 15213.

Sagrada Família (Nativity Façade), Antoni Gaudí (1892-1910) Carrer de Mallorca, 401, 08013 Barcelona, Spain.

Casa Calvet, Antoni Gaudí (1898-1900) Carrer de Casp, 48, 08010 Barcelona, Spain.

Estereostàtic model, Antoni Gaudí (1898-1908) Carrer de Mallorca, 401, 08013 Barcelona, Spain.

Park Güell (Viaduct Colonnade & Gatehouses), Antoni Gaudí (1900-03) 43448 Poblet, Tarragona, Spain.

Miralles Gate, Antoni Gaudí (1901-02) Passeig de Manuel Girona, 55, 57, 08034 Barcelona, Spain.

Mallorca Cathedral Restoration, Antoni Gaudí (1902-14) Plaça de la Seu, s/n, 07001 Palma, Illes Balears, Spain.

Casa Batlló, Antoni Gaudí (1904-06) Passeig de Gràcia, 43, 08007 Barcelona, Spain.

Casa Milà, Antoni Gaudí (1906-10) Passeig de Gràcia, 92, 08008 Barcelona, Spain.

Sagrada Família Schools, Antoni Gaudí (1909) Carrer de Sardenya, 316, 08013 Barcelona, Spain.

Colònia Güell Crypt (Convex Vaults), Antoni Gaudí (1910-14) Carrer Claudi Güell, 08690 La Colònia Güell, Barcelona, Spain.

Sagrada Família (Vaults & Bell Tower Pinnacles), Antoni Gaudí (1922 & 1923-25) Carrer de Mallorca, 401, 08013 Barcelona, Spain.

bibliography:

Essay on the Theory and History of Cohesive Construction: Applied to Timbrel Vault, Rafael Guastavino (Ticknor & Co., Boston, 1893)

Little Story of the Casa Batlló, Bel Olid (Editorial Mediterrània, Barcelona, 2012)

A Stroll with Mr. Gaudí, Pau Estrada (Editorial Juventud, Barcelona, 2013)

A Sea of Stories: Gaudí, Anna Manso (Editorial Mediterrània, Barcelona, 2018)

A Dragon on the Roof, Cecile Alix & Fred Sochard (Prestel Verlag, Munich, 2019)

materials:

<http://www.finalmove.com/the-architecture-of-antoni-gaudi-fluid-plasticity/>

<http://www.schluebarchitecture.com/lectures/2020/cmu/gaudi/plasticity>



Colonia Güell Crypt holy water font sea shell with convex vaults sagging between inclined supports (Antoni Gaudí, 1908-14).



Sagrada Familia Schools sinusoidal bóvedas tabicadis with compressive concave inverting into adhesive convex (Antoni Gaudí, 1909).