



Welcome to **The Architecture of Antoni Gaudí.**

Questions > **Raise Hand & Chat questions to Erin (co-host).**
5 to 10 minute break & 10 to 15 minutes at end for **Q&A.**

Gaudí's **study of color & light** in **ceramics** and **hyperboloid window stained glass.**

Casa Vicens, Antoni Gaudí (1883-88) **cast palmetto**

*“**Architecture** is the main plastic art, **all of its excellence comes from light.***

***Architecture is the organization of light**, **sculpture is the play of light**, **painting is the reproduction of light through color, which is the decomposition of light.**”*

- Gaudí

Chiaroscuro effect of **light and shadow**, enlivened with **openings and protruding elements**, **convexity and concavity alternating** to expressive richness.

El Capricho, Antoni Gaudí (1883-85) **dimensional tile**

Leitmotif: Illuminated Space

*“The **essential quality of a work of art is harmony.** **Plastic arts are engendered by light, which decorates and creates relief.** I suspect that the **Latin word ‘décor’ means ‘light’** or something closely connected with it and which **expresses clarity.** The light that creates the **maximum harmony is the light that falls at a 45 degree angle, striking masses neither perpendicularly nor horizontally.** This light, which is of **medium strength**, gives the most **perfect view of structures**, and a **more detailed perception.** This light is the **light of the Mediterranean**, the people of the Mediterranean, ‘between the land’ are the **true repositories of plasticity.** **Virtual lies in the mid-point.** On the coast of this ocean, great artistic cultures have **flourished as a result of the balance of light, Egyptian, Greek, Italian.** There is neither too much nor too little. This does not exist in the countries of the North, where light is miserable and horizontal. Nor in the hot countries (of the South), where it is vertical. Things **cannot be seen very well in poor light of the North or in the dazzling light of scorching climates.** Both extremes are blinding and the **blind cannot see, their spirit is abstracted.**” – Gaudí*

Intensity of **light is greatest** perpendicular to surface illuminated, at **lowest** when parallel to surface, and **softest**, most **beautiful** when falls at 45 degree angle.

3:05

Finca Güell Horse Stables & Dragon Gate, Antoni Gaudí (1884-85) **textural**
Different times of day, **sun in varying positions** of the sky, **hitting the façade at differing angles**, varying the effects and **expression of textural materials, patterns, tones**.

Exploited **contrast of terracotta bricks with yellowish masonry**, with the shiny greens and whites of ceramics.

Palau Güell, Antoni Gaudí (1885-88) **modulation, Layering**

Offset the cold darkness of wrought iron with bright stone, selecting yellow, green, black schists to obtain masterful gradations.

1890, the **first exhibition** of **Impressionist painting** had been held in **Barcelona**.

1892, the **first performance** of **Wagner's Tannhauser** at **Liceo Opera House**.

Spirit of flamboyant and rhetorical mysticism, colors flowed one into another, without clear line of separation. Colored glass, mosaic, polychrome sculpture all fused into a cohesive unit.

Santa Teresa Convent, Antoni Gaudí (1888-90) **rhythm variations**

For Gaudí, **light was the soul of architecture**, the **play of light on its surfaces**, the **contrast of light vibrations from surfaces**, which are the **visual effects of texture**, are the **factors of architectural expression**. Like a sculptor, he would **carefully study the changing effects on his buildings produced by the moving sun**. Endeavored to create a skin which was at once alive and interesting.

Park Güell Colonnade Viaducts & Entry Stairs, Antoni Gaudí (1900-03) **facets**

Movement of architectural form allow the light to play on surfaces, producing infinite number of shades and variations. Broken **ceramic fragments** gives surface a vitality through the tilted reflecting planes of the inset pieces, catching the sunlight each from a different angle.

*“The architectural styles that we might call **cylinders are rigid**, filled with inert masses for the **purpose of stability**, and are an **obstacle to light**. Their rigidity and uniformity **demand the use of strips, fluting and moldings**, which **provide variety**. With the **well-reasoned use of bulging surfaces**, no moldings are needed, they are **adaptable to all kinds of locations and volumes**, by avoiding all laws concerning passive or inert masses, and **producing, therefore, more light**, where the light combines admirably with sound.” – Gaudí*

*“The **paraboloids, hyperboloids and helicoids**, with their **constant variation of the incidence of light**, have their own **richness of nuance** and do not need any sort of **ornamentation** or even molding.” - Gaudí*

In 1893, formed **Cercle Artistic de Sant Lluc**: Artistic Circle of St. Luke
 Founded by group of **Catholic artists**, in reaction to the **Nietzschean, atheist, young anarchist artists of L’Avenc**, **art as religious and social reform**, the political restoration of Catalan Church. As in the **Alex Clapes** paintings wrapping the walls of the salon in **Palau Guell**. Decorative, **symbolic painting**.
 Led by the **Bishop Torras i Bages**, “Catalonia will be Christian or it will not be.”

Mallorca Cathedral Restoration, Antoni Gaudí (1902-14) **colored light**

Not a remodeling, but a restoration of things in their original place. Not a question of improving or innovating, but rather restoring. A freeing of the building from the violence of its alterations.

The characteristic above all was **proportion**, its **harmonic correlation of dimensions**. Graceful proportions and **elegant lightness of lines**, **smooth prismatic pillars** and **great windows**, **to create space and void** (Espay y buit). Something **more than can be seen with the eyes**, **proportion is the essence** of a cathedral, the soul of the building, **above and beyond its material presence**, transcendent air. What was to be restored, was the original great vision, essence as opposed to presence. The temptation of material, a struggle against its seductive power. It is in the void that a building finds its theme, a unity not apparent to the eye, but transcendent and totemic.

Removed the great baroque retablos from behind the altar, to **expose to view the cathedral of stone**, in which authority reveals itself as unalterable.

Moved the choir from the central nave, where it is normally situated in a Spanish cathedral, **to the presbytery around the altar**. Once choir removed, **liberation of cathedral's space** was immediately apparent. To **correct history**, to **peel back the layering of alterations**, to return to the **stones of the cathedral, now speaking**.

Air hardened by the **baldachin canopy** above the immense weight of **stone altar**. Canopy composed of waste materials, **slightly inclined, imbalance, arrested movement**.

*“The **light** in a church must be sufficient, and no more.*

For a church is a place for withdrawal.” - Gaudí [worship in hiding: catacombs]

Light should be moderate, **only what is necessary for worshipers to read** comfortably, **without overly powerful lighting that distracts**, causes uneasiness.

Altar, which liturgy uses candles, **must not be outshone**, therefore advised use of **unlimited number of lamps**.

“The **altar, which should only be lit by candles**, must not remain in the background.” – Gaudí

[Candlelight over altar, the light on dinner table, where family gathers, seated around to share a meal and converse, illuminating conversation, communion of spirits, making the family unit, over daily bread.]

Candles, in spite of weak light, the flame aided by mobility, given by the air, acquire a life which electricity does not have.

3:25

Gaudí preferred natural light to the illumination of electrical lights. When electric lights were used, not in illumination of surfaces, but to highlight architectural features. Opposed the uniform and monotonous effects of central illumination, rather advised putting lights next to walls, sources out of sight, indirect lighting.

October 31, 1903, installed stained glass windows he had worked on in Barcelona.

Color is the last of the qualities of a work of architecture, what gives it a vital depth, complementing and enhancing the form. Color was an obsession with Gaudí, in that it derives from light. When he conceived of a building, he already saw it with final coloring.

“When people see a pale person, they say that he looks like a walking corpse. On the other hand, when they see a corpse that still has color, they say it seems to be still alive. And the fact is that all living beings have color, color is inherent in life and life is the essential quality of a work of art.” - Gaudí

Polychromed architecture was an absolute necessity. For architecture to produce the sensation of life, life demands color.

Used by the **Greeks** and **Egyptians**, making outlines and structure more energetic, clearer idea of the object.

“The **Greeks**, whose temples were made of **Pentelikon marble**, a marble that is crystalline like sugar, transparent and uncommonly beautiful, didn't think twice about painting on it, because color is life and we should not denigrate this element, we should use it in our works.” – Gaudí

As a **Catalan**, color was a part of Gaudí's native tradition. **Polychromy** has been regarded as an **essential element of both architecture and sculpture**. The brilliance of the Mediterranean sun demands it. The **Renaissance** tended to strip sculpture and eventually architecture of their colors to a **bare and austere monochrome**.

We have grown up surrounded by colorless buildings. To find color, one had to go to the market, the village fair or circus. Spain was a **fusion of Gothic and Moorish**, the meeting of East and West, the **brightly colored ceramics from the Arab tile factories**, covered the domes of churches along **Catalan coast**, gleaming in sunlight from **great distances**.

Mallorca Cathedral restoration, **repainted the dark, smoked vaulting in effort to suggest its original appearance**. **Accentuated the ridge ribs, other structural elements, ornaments in bold, bright colors**. To rejuvenate the church in its entirety, to make it alive again. The **Mallorcans, accustomed to a patina of four centuries of grime, were shocked** and Gaudí was eventually forced to stop work.

“Ornamentation consists, as it has and always will, of coloring, since nature does not produce any objects that are monotonously uniform. Everything in the plant world, in geology, in topography, and in the animal kingdom always has some kind of contrast in colors. Thus we are obliged to color, partially or completely, an architectural feature, and though this coloring may disappear, the hand of time will always provide it with another beautiful coloring of its own, that of antiquity.”

Gaudí preferred **natural coloration of materials**, stone, terracotta, clinker brick, or faced with glazed broken tiles.

Parti: Vidre de Colors Colored Glass.

Stained glass three-color process: four layers of plate glass, yellow, red, blue, and white, to distribute the light properly. Each is **toned down by an acid, according to which color is predominate** the others. If green is to dominate, red is toned down, leaving blue and yellow to mix creating green. **Shades of white to modulate the intensity of light**. Result is an extremely sharp picture, obtained purely by the contrast of colors and **without using traditional enamels to obtain color, which reduce the transparency and transmission of light**. Provides **infinite shading tones**.

After visiting the south of France, Gaudí criticized the **grisaille (enameled or painted)** stained glass that he saw, calling it ‘trash’, its **overly heavy contours, brushstrokes that dirty the windows**, making it **look like caricatures**, blocking the light.

Gaudí sought the **emotional effect of light and color**, but never without the natural **truth of the meaningful, utilitarian aspect** of the object, the constructive elements underlying the mechanical function. The stained glass windows must **transmit the light, illuminate the space, before defining the feel** of the place. Cultivated the concrete, fleeing from the abstract.

Manifesto: Casa Batlló, Antoni Gaudí (1904-06) **reflectivity**

Subtle undulation of face, caught by light, contrast to sharp contours of stone.

Dragon **roof varnished tiles** to give **metallic reflection**.

Light and ventilation louvers.

Light wells of staircase, reflectivity of varying hues, lighter deeper down, **uniformity of light controlled via reflectivity, luminosity value, size of openings**.

Casa Milà, Antoni Gaudí (1906-10) **sculptural form**

To be an **apparition of Virgin Mary**, sculpted in stone with **Venetian mosaic** colored glass and **gilded metal**, **crowning the white marble roof**. Complimented by the leaves and flowers of **climbing plants grown in pots on the protruding balconies**.

“The patina of the stone, decorated with climbing plants and flowers on the balconies, would give a permanently varied coloring to the house.” - Gaudí

*“Projecting and receding features must be combined so that each **convex element with the light falling on it is matched by a concave element in shadow**. The details must be carefully studied, because it forms the projecting edge, the **element in shade need have no details**. Some artists **accentuate the lines** (with ornament) in order to **emphasize the expression and their work becomes a caricature**.” – Gaudí*

Ten Minute Break

Colònia Güell Crypt, Antoni Gaudí (1908-14) **penetration**

Bolder texture on the exterior outer walls than the interior, out of respect to the contrasting light effects.

Stained glass windows, free forms of a flower, each uniquely different in size, shape and color, but all maintain a family of resemblance.

Sagrada Família Hyperboloid Windows, Antoni Gaudí (1918) **parabolic section**

“The *tunnel vault* is a prison, or rather a drain, an oppressive intimacy.

The *spherical vault* is a furnace. **Intimacy combined with space** is the *forest-like interior of the Sagrada Família.*” - Gaudí

Gothic cathedrals, light entering windows narrowed by buttresses and directed into channels perpendicular to nave. **Sagrada Família walls no longer structural**, roof vaults supported by tree columns, permits walls to be nearly all windows. Without buttresses, **light can enter at oblique angles**, **splayed windows deflecting and spreading light in all directions**. Windows were arranged precisely so light would be **diffused through spaces between columns**, without revealing the light source, the **effect of a forest**. **Convex vaults also reflect and diffuses** the light, greater softening and harmony. Sense of well-being, by light filtered through leaves of a tree, a thousand different shades.

After **Estereostatic model**, changed the system of vaults and columns, transferring the **weight of stone roof to inclined supports**, interior of Sagrada Família became a **forest of aligned trees with trunks, branches, leaves and fruit**. [Crypt]

The **column trunks** of the **side aisles** **slanted in opposite direction** of **central nave** column trunks.

Load bearing rib vault changed to series of **hyperbolic domes**: light vaults, molding interior space, without lateral thrust. **Play of light on vaults and columns** was subject Gaudí was constantly preoccupied. Vaults composed of system of inverted **hyperboloids**, convex and concave, **parabolic concave** in the center supported by the inclined branches, **convex** the spreading ends of the branches, the twigs and leaves. The **intersections between produce paraboloids**, **perforated star-like** formations, that **scatter points of light**. [Palau Güell]

Evolution of designs in windows of Sagrada Familia:

Neo-Gothic style, lower windows in nave with **twin pointed arches**, three section transom, **16 point rose window** above. Between triforium and gable, smaller with single transom and 6 point rose window. **Stained glass strong colors**. [Mallorca]

Parabolic structure on interior (1914), surround of **rose window deeply incised** to produce special light effect. Outside same Neo-Gothic style. [Finca Güell]

Paraboloids and hyperboloids on interior and exterior, depth and robustness to the reveals. **Upper rose windows ellipse** surrounded by 8 eyelets. **Blending with vaults and columns** by two generatrices forming inner gable, a mobility of form to whole interior, **geometry of space**, preparing eye for clerestory. **Stained glass** with colored parable figures ('I am the Way', 'I am the Light', 'The Truth and the Life'), surrounded in pale tones. [Park Güell]

Oval window with 4 eyelets, emphasizing whole, **freer play of geometrical forms**.

Clerestory stained glass in white to illuminate vaults decorated in mosaics.

Inverted from [Casa Batllo], **light decrease as it moves down**, through color, to create a setting **more appropriate for reflection and meditation**. [**worship in hiding**]

Curved forms on exterior repeated on interior, **soften light as it enters**. Union of the vaults, with natural curve of windows, and adjacent upper branches, directing a **rhythm of light entering**, **splayed louvers dispersing in infinite variations of intensity and color**. [El Capricho]

Altar is plain table and crucifix, with no retablo or statues. Above a baldachin canopy bordered with 50 lamps, symbolizing the Holy Spirit sent down, suspended from triumphal arch springs from apse columns. [Mallorca]

Lamps, made of metal, stained glass, and precious stones, unfinished ones on Gaudí's desk when died.

Central dome at apse, visible from main entrance at end of nave, proportions of a centralized Greek church, rather than elongated Gothic church. [Mallorca]

In nave, the series of windows with a similar facing and light could have been identical, but the overall vision means they were designed with a global gradient from the crossing to the Glory façade. This way, on the Nativity side, the yellows slowly move into greens and then deep blues and on the Passion side, the transformation goes from yellow into oranges and reds. [Crypt]

[One decision that had to be taken was whether the stained-glass windows would be figurative or not. Vila-Grau assumed, from the moment the Junta Constructora commissioned him to do the work, as his work was more abstract, that this decision had already been taken, or at least accepted. So, the first window he made, as if for an entrance exam, was that of the Resurrection, on the Passion transept. It was nearly the only stained-glass window with clear symbolic content established in Gaudí's project, furthered by all the work Subirachs had already done on the exterior. The theme of the triumph of life over death, the idea that the seed must be buried before it can bear fruit, was the inspiration that led to the concept in this window of light triumphing over darkness. While not figurative, those who are keenly aware will sense the ascending rhythm of the lead lines and, even, come to see the resurrected Christ. Vila-Grau didn't want to explicitly draw this, but on occasion he has expressed his satisfaction that the work conveys this intention.]

[**Edict of Milan** (313 A.D.), **Constantine the Great** made peace with the **Church**, people could **worship outside of the catacombs, building temples**. **Symbolism** became important **part of the Liturgy**, an external sign of a religious idea, **imagery necessary to reinforce methods of worship**, previously **private, varied interpretation**. **Crypt** below main open church, **symbolic of the private earlier worship in hiding**, origin of Christianity formed in **a community of small groups/families**.] [**Crypt**]

4:15

Q&A