

The Magic of Antoni Gaudi

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When I was first assigned to write on Antoni Gaudi (1852 – 1926) of Barcelona, I abhorred the topic. I imagined Gaudi as a typical back-in-the-day architect who repetitiously used elements of Roman architecture. I was stereotyping because Roman and medieval architecture were popular in the nineteenth century. However, when I did the research, I was awed. Gaudi created odd designs and informal shapes, which most architects would typically level out. Despite the fact that he may have been color blind, he showed the world that he could create magic. His magic was to incorporate natural figures into his buildings and colorful tiles in exteriors and interiors. When he used to take his morning walks, he would carefully observe nature, especially how trees or animals stood upright. Because his styles are abstracted from nature, his works are original and organic. For this reason his art is called Catalan Art Nouveau.

Antoni Gaudi grew up in Tarragona, in Catalonia, Spain. His father was a coppersmith. He studied at the Escola Superior d'Arquitectura in Barcelona. At that time, Europe was looking for its identity through a unique architecture. The Catalans mixed local Gothic and Islamic art in their new design, which became the Catalan architecture. Because Gaudi's family was poor, he was given an allowance to work with several architects. One of them was Joan Martorell by whom he was inspired to use Gothic and Islamic design in his early works (Solas-Morales 17). Personally, Gaudi admired Violet-li-Duc's works because Violet-li-Duc revolutionized Gothic's heavy supporting structures into autonomous ones (10). In Paris, Violet-li-Duc designed stone domes surrounded with groin vaults without supporting columns. He used cast iron braces at the corners to support the building's weight (10). This is why Gaudi was inspired to establish alternative use of a structure. Although Gaudi's work was loathed by his peers, he had a fan who appreciated his strange designs, Eusebi Guell, an industrialist who supported Gaudi for Casa Mila and for many of Gaudi's other works.

"If Art Nouveau was a delicate flower, Gaudi was a jungle" is what one website says (McGee, <http://metropolis.co.jp/tokyo/505/art.asp>). The way Gaudi imitated nature can be fascinating to describe. If one takes Casa Mila, for example, and focuses on a particular space, he could personify that space several ways. I have read a few articles on Casa Mila. Just the carved balcony of Casa Mila was said to be the bird nest or the cave houses. I find the carved balcony looks like the hollow eyes of a skeleton. Also, "The facade itself glitters in numerous colours, and small round plates that look like fish scales are let into it" (<http://gaudi.hit.bg>). Moreover, since the building has no edges or corners, its smoothness and curves suggest a "sea serpent" wriggling in a space. Another example of his design is Casa

Batlo. As Rainer Zerbst says, the roof of Casa Batlo takes us to a “mythical world”; it has a ridge that looks like the “backbone of a dinosaur” (Zerbst 176).

Architects may create new designs, but at some point they always refer back to historic architecture. In his projects, Gaudi experimented with Gothic, Islamic, and extravagant decorations. Gaudi’s work is incredibly artistic, especially the way he arranged tiles in the interior and on the exterior of buildings like a collage. This work is seen in Casa Mila, Casa Batlo, Park Guell, and Sagrada Familia; however Casa Vince (1883-1888) shows the mixture of Islamic architecture with Moorish minarets and pointed arches. Its black and white checkerboard design looks similar to the Islamic glazed tiles on the façade. We can also see some of his Gothic styles in Bishop’s Palace in Astorga, Spain, a huge structure with skinny windows, rose windows, and internal arches.

One of his successful creations due to Violet-li-Duc’s inspiration was the alteration of the flying buttress: the catenary arch. It is very interesting how he worked with simple devices that worked faster and more profoundly than powerful computers. He used rope and hung it from the ceiling, put weight on it, looked at the reflection in a mirror, and then inverted it. This became the catenary arch, which he used to determine complex curves for construction. The basic knowledge of the catenary is that all the elements on a hanging cable are in tension, so if we were to invert that cable then all of its elements would be in compression. If stone masonry is built, it needs great resistance from shear forces. If we place a catenary arch outside of the stone masonry, it will resist shear force. Then the structure will not fail due to structural failure; it may fail due to material failure, if the materials are not strong enough for the loads. It is evident how efficient the catenary arch is (Deville).

Gaudi spent a lot of his time coming up with effective structures. He figured out how to use iron in his rippled design. The wavy structure in Casa Mila basically consists of wrought iron girders and vaults that are supported by metal beams on brick, ashlar, and iron columns. He placed the girder in between the spans, which eliminated the load-bearing walls. To hold the façade, the rippled lintels are built into the stone and attached to girders. He commented that even if Casa Mila becomes a hotel someday, there would be no problem. Because there are no bearing walls, the walls he has in the building can simply be taken away (www.gaudiclub.com).

Gaudi’s accomplishments did not come without a conflict with the law. When he was constructing Casa Mila in 1906, a column exceeded the one-meter limit on the sidewalk, which was not on the plan. The officials ordered the construction of Casa Mila stopped, but Gaudi refused to fix the problem, and instead continued his project. Then, the government threatened to cut down the column that exceeded the legal limit; Gaudi replied he would respect their decision and would put an inscription on the sidewalk explaining his motive. This wasn’t the end of his dilemma, however. Gaudi extended four meters on the building height, added volume of more than 4,000 square meters, and projected the cornice past the limits. Because his building had unique aesthetic values, after many meetings with the officials, it was agreed that they would spare him

(www.gaudiclub.com). This proved how determined he was to keep his plan. Could anyone today take a chance like Gaudi?

Gaudi's most common decorative material was mosaic. His use of mosaic inside and out really takes me to his colorful magical world. In Casa Batlo, the mosaic in the entrance to the master bedroom balcony was made of recycled clay pipes, china, ceramic tiles, and glass to design the Spanish flower garden on the wall (<http://www.inspiredmosaics.co.uk/21.htm>). This is really elaborate and elegant work, rarely seen on such a large scale.

Gaudi said, "Only man drew straight lines. God and nature preferred curves" (www.spanish-living.com). And, yes, we can clearly see how strongly Gaudi felt about nature. Everywhere we step in his buildings, the design will remind us of caves, plants, and animals. Inside of Sagrada Familia, the columns look like the stem of a plant and the column capitals look like sunflowers that are branched out in four different directions. Now, I can see how important he is to architecture, and I am truly inspired by his magic.

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