

**The Influence of Nature on the Casa Batllo (1904-6) by the Architect
Antoni Gaudi**

"Catalans have a natural sense of the three dimensional that gives them an idea of things as a whole and of the relationship among things." Gaudi

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Abstract

When I first laid eyes upon the Casa Batllo, by Antoni Gaudi I Cornet, I was inspired by the multitude of colours incorporated into the facade, which ranged from Prussian Blue to Cadmium Yellow.

Image removed for copyright reasons

The colours reminded me of the painting “Starry Night” by Vincent Van Gogh where colour and texture meld flawlessly into a continuously shifting image, maintained by a lack of straight lines. The colours stimulated my interest and kept me fixated on how utterly organic the building felt, as if it simply sprang forth from the ground. I was drawn to the building by the extensive mosaic work which captured light and conjured up the essence of a natural, aquatic landscape. I set out to investigate the extent to which Gaudi was influenced by Nature

and natural forms in his design and construction of the Casa Batllo.

To begin investigating the influence of Nature on Gaudi’s Casa Batllo, I first examined key factors that may have influenced his art. In this essay, Gaudi’s childhood sickness and the effect that this had on his artistic vision is briefly explored. Then, the *Modernisme* movement which began in the early twentieth century, is examined for the extent to which it could have influenced Gaudi. A close analysis of the influence of natural forms on aspects of the Casa Batllo follows. To provide a wider reference, these aspects are compared to other works by Gaudi such as Park Guell and the Sagrada Familia. Key to my thesis is the analysis of photos of the Casa Batllo, some of which are my own. Various secondary sources such as *Antoni Gaudi* by Rainer Zerbst are also important in arriving at my conclusion that the Casa Batllo was to a large extent influenced by Nature.

Introduction

Standing in front of Casa Batllo, house number 43 of the Passeig de Gracia in Barcelona, one is instantly struck by the bizarre form of the building. At ground level, there are six towering pillars which resemble a concatenation of thigh bones of some large ancient animal. However, take a step back and the building reforms itself into an altogether more delicate, living form, strengthened by a roof reminiscent of a gigantic scaly spine. The roof is pierced at its highest point by a cross which stands as testament to the architect's religious faith. Lying between the supporting bones and the fleshy roof is a magnificent facade, dotted with small, iron balconies which seem to mirror the scales of the roof. In the morning sun, the walls gleam like ice as the light dances on the glazed polychrome ceramic tiles which mosaic the entire facade. Try as you may, it is difficult to find a single straight line as even the stone walls ripple with the essence and life of the sea. It is as if a pulsing wave has eroded the roughness of the stone, leaving smooth, gentle undulations which resonate throughout the structure and draw you inside...

The Casa Batllo is at first glance a building of pure fantasy, not grounded by any theme or idea. However, upon closer inspection it becomes clearer that the house has been greatly inspired by Nature. It becomes apparent that Gaudi had a deep understanding of Nature as a "whole and of the relationship among things"¹. By examining and drawing from Nature, Gaudi opened up a vast and utterly more complex world of growth and form. Art historians such as Rainer Zerbst, and Isabel Artigas agree that Casa Batllo does not simply imitate Nature, but instead creates new forms with a distinct life of their own. Thus, in understanding these natural forms in Gaudi's work, one must first understand the factors which may have shaped his artistic style. By investigating possible influences on Gaudi, such as his childhood sickness which confined him to his home, or the *Modernisme* movement, with its reverence of organic lines; one is closer to understanding the intricate beauty of the Casa Batllo, and on a wider scale, Gaudi's other works.

¹ Zerbst, Rainer. *Antoni Gaudi*. Cologne: Taschen, 1988. Page6

The Architect Himself

To begin to understand Gaudi's Casa Batllo, it is important to attempt to establish and understand the man himself, and the events which may have shaped his life and certainly his artistic vision. The Catalanian Antoni Gaudi I Cornet was born in Reus - a Baix Camp (lower plains) west of Tarragona- in 1852. As a child he was trained as a craftsman in ornamental and utilitarian copper smithing by his father. Thus as a young boy, Gaudi was orientated towards a direct and hands-on approach in his artistic endeavours and towards his environment. Growing up, Gaudi had a keen interest in the natural world of plants and animals. This was further developed by the fact that he was plagued by sickness. "Rheumatic ailments prevented him from romping around...with others his own age"², and instead he was forced to stay at home. He was prescribed regular exercise and thus as a youth Gaudi took many walks in the countryside, examining the local flora and fauna. In fact, "his only known schoolboy essay was in praise of bees"³. Gaudi later said that Nature was "the Great Book always open, that we should force ourselves to read"⁴. Being a Catholic, Gaudi's declaration suggests within him a great reverence for Nature God's creations. It is this reverence-developed since his youth- which can be seen in his overall oeuvre, especially the Casa Batllo.

² Zerbst, loc. cit.

³ *Antoni Gaudi: God's Architect*. Directed by Robert Hughes. BBC Productions, Britain, 2008.

⁴ Hughes, Robert. *Barcelona*. London: The Harvill Press, 1992. Page 468

The *Modernisme* Movement

The form and style of the Casa Batllo is nearly inseparable from the aspirations and transformation which occurred in Catalonia during the last quarter of the 19th century. If “Architecture is never a phenomenon enclosed in itself but a social manifestation”⁵, then the Casa Batllo is certainly impregnated with inspiration from the *Modernisme* movement. The *Modernisme* movement in Catalonia began around the second half of the nineteenth century following the massive social changes initiated by the industrial revolution. The revolution instigated the rise of a new middle class, which spurned the “apparent loss of aesthetic integrity in mechanically reproduced objects”⁶ and yearned for a new artistic and cultural movement as an ‘antidote’ to industrialisation. It must be noted that this feeling was prevalent throughout Europe and was given a different name depending on its country of origin. In France it was called the familiar Art Nouveau movement; Modern Style in England and “*Modernismo* in Spain, which in Catalonia was called *Modernisme*”⁷. Thus, the movement cannot be defined into a single style, derived from a clearly delineated area of culture. Instead, it stems from a series of aesthetic intentions which manifested in formal attitudes with a fundamental unity of dogma. Translated, *Modernisme* literally means ‘a taste for modern things’ and was a reaction to the “slavish imitation of past styles, mass produced during the nineteenth century”⁸ and ultimately aimed to encourage organic unity in design. Classical design was downplayed by “emphasising the predominance of curved lines and floral motifs”⁹, and by using a wide variety of materials which allowed the artist to break free from expressive austerity.

In examining the Casa Batllo, one can suggest that that certain elements are greatly influenced by *Modernisme*. The Casa Batllo is a clear break from classical design and seems to be purely a product of imagination. Instead of symmetry, the house is dominated by undulating lines and widely used floral and animal motifs of mushrooms and nautilus shells. In addition, broken ceramics and glass are used extensively to capture light and add personal flair. Gaudi could also have been inspired by ‘new age’ artists who pursued the natural sciences with parallel careers in design, such as Christopher Dresser. Similar to Gaudi’s buildings, Dresser’s works embodied morphing linear swells and undulating organic surfaces as motifs. His work would have been “accessible to Gaudi through British Arts and Crafts sources such as *The Studio Magazine*”¹⁰. However, Gaudi was renowned for his reclusive character and there are limited sources on his life. Thus, it is unknown as to the extent in which he took active part in the *Modernisme* movement. Regardless of a clear connection to the

⁵ Sola-Morales, Ignasi de. *Gaudi*. New York: Rizzoli International Publications, 1984. Page 5

⁶ Bossaglia, Rossana. *Art Nouveau*. London: Orbis Publishing, 1975. Page 3

⁷ Artigas, Isabel. *Gaudi: Complete Works*. Barcelona: Evergreen, 2008. Page 14

⁸ Bossaglia, loc. cit.

⁹ *ibid.*

¹⁰ Carmel-Arthur, Judith. *Antoni Gaudi*. London: Carlton Books, 1999. Page 28

Modernisme movement, the Casa Batllo does seem to represent associated values such as the use of solely curvaceous lines throughout the house, as well as the stylised motifs of sea organisms. In addition, the house does seem to be an 'antidote' to industrialisation with its wholly organic presence which stands in Barcelona as a pinnacle of natural beauty.

The Casa Batllo

The details of a particular commission can be an important consideration in the realisation of an architect's vision for any building project. Notably, Gaudi's Casa Batllo is a work of individual creativity and expression, not limited by the common constraints of strict commission orders. Gaudi was commissioned to work on the Casa Batllo from 1904 to 1906. The owner, Joseph Batllo I Casanovas "felt the 'aesthetic' obligation to update the antiquated appearance of his house built in 1877"¹¹. This was partly due to the fact that his neighbour had recently renovated. Thus in an act of one-upmanship, he commissioned Gaudi to update the house, and his offer was accepted.



Image by Paolo da Reggio

Figure 1

is the spinelike zigzag of the Casa Batllos' roof, which corresponds well with the firm stepped gable of the neighbouring house (Figure 1).

Ultimately, Batllo gave Gaudi free rein and budget and thus, the resulting building was a spectacular and individual work of architecture. Interestingly, Gaudi's first decision for the house was not to tear down the old building and start from scratch, but only to renovate. This was perhaps because he already saw the potential within the building, or because he did not want to make such a drastic break with the old. However, in keeping the original house, Gaudi was faced with a few obstacles, such as the siting of the Casa Batllo between two buildings with differing heights. Gaudi was "obliged to follow the construction norms imposed by the town hall"¹², which meant that the height of the Casa Batllo had to be harmonious with neighbouring buildings. Gaudi paid attention to the surroundings of the house whilst designing the roof. One such example of this

¹¹ Artigas, op.cit., Page 340

¹² Ibid.

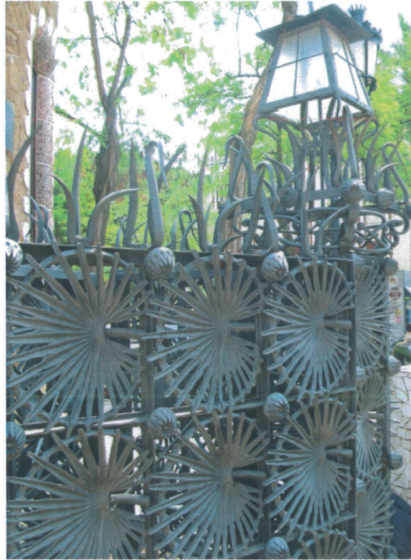


Figure 2



Image by Marku1998

Figure 3

In addition, the house is evidence of Gaudi's ability to give small areas an illusion of space and magnitude. Similar to the effect of the gigantic iron gates at Park Guell (Figure 2), the large pillars of the house (Figure 3) form an arcade and give the impression of gigantic proportions.

Ultimately, the straight lines of the original house are nowhere to be seen in the finished Casa Batllo where the interior and exterior seem to be one. This is mainly because Gaudi saw architecture as mouldable dough, rather than an immovable structure. Despite this, the Casa Batllo can still be loosely divided into four main areas: the facade, the courtyard, the roof and the various rooms. An analysis of these areas clearly demonstrates that Gaudi's was certainly influenced by Nature.

The Facade

The facade of the Casa Batllo is arguably, the most important part of the house as it is the canvas from which Gaudi could express his veneration of Nature to the world. The first thing that one



Image by Cristian Bortes.

Figure 4

realises is that the facade of the building itself is not flat. It has subtle and slight vertical undulations which are embedded with multicoloured ceramic circles and *trencadis*- mosaics made with broken tile shards. Notably, not all the mosaic work was done by Gaudi. He “hired an assistant by

the name of Josep Jujol to assist with the exterior mosaic work”¹³ as he was impressed by Jujol’s skill with colour. This reminds us that sometimes, the realisation of an artist’s vision can only come about through collaboration.



Figure 5

Perforating the ceramic mosaic facade are intertwining iron balconies. They break up the flatness of the windows and are quite suggestive of animal or human skulls (Figure 4), hence the building’s local name of ‘House of Bones’. This is mirrored in the tribune windows of the first floors which may be representative of bones held together by tendons. Also, the likeness of the tribune windows to a gaping maw further emphasise the presence of the dragon and imply that the bones may be remnants of his victims. This is further conveyed by the furniture designed by Gaudi which unifies space and function. For the house, Gaudi designed a suite of chairs in seamless carved wooded forms which are reminiscent of femur or pelvic bones. This is shown in Figure 5.

¹³ Sola-Morales, op.cit., Page 8

Some art historians such as Marvin Trachtenberg argue that the facade was the result of Gaudi's misinterpretation of the French architect Eugène Viollet-le-duc. He argues that whilst the French architect "advocated 'organic rationalism'¹⁴ and compared it metaphorically to the organic functionalism of the parts of a tree or animal skeleton", Gaudi literally "built a structure that looked like a tree or skeleton"¹⁵. Misinterpretation or not, the facade of the Casa Batllo is still an organic form dominated by skeletal imagery yet ironically, almost breathes with life. Gaudi's use of skeletal and mythical symbols works towards conveying his understanding of Nature as a cycle of life and death. This is expressed throughout the house by a profound contrast between gentle surging lines and lively colours, and on the other hand, the imagery of bones – clearly associated with death.

The Roof

The roof of the Casa Batllo would seem to be influenced by a combination of religion, architecture and Nature. The biblical story of St George and the Dragon and his moment of triumph is literally woven into the house, rendered in stone, metal and mosaic. As shown by Figure 6, the tiled roof, similar to a dragons' back is pierced by a tower surmounted by a cross and "bearing the names of Jesus, Mary and Joseph"¹⁶. This suggests that for Gaudi, the Casa Batllo was not a project solely for his commissioner, but a homage to God and his divine creations. Just as T S Eliot's description of a "lotus rose" in water which "glitters out of heart of light"¹⁷ in *Burnt Norton* pays tribute to the existence of God, Gaudi too, celebrates the divine hand responsible for natural design.

Additionally, it should be noted that St George is patron saint of Catalonia; and thus the building can be seen as symbol of both Christian power and Catalan nationalism. The moment in which the dragon is slain, can be seen as a symbolic of Catalan economic and cultural triumph during the *Modernisme* period. Even though the skull-like balconies seem to represent the dragon's victims and undermine the notion of victory, the fact that the mythical and animalistic form



Figure 6

Its depiction of the

¹⁴ Trachtenberg, Marvin. *Architecture From Prehistory to Post-Modernism*. London: Academy Editions, 1986. Page 511

¹⁵ Ibid.

¹⁶ Hughes, op.cit., Page 514

¹⁷ Eliot, Thomas Stearns. *Four quartets*. New York: Harcourt Brace Jovanovich, 1971. Page 24

of the dragon is ultimately slain by a Christian lance, provides a sense that these victims have been avenged.

The roof makes it clear that when building the Casa Batllo, Gaudi was considering not only the wishes of Batllo, but also of God. The placement of the tower at the highest point of the house is evidence of this. In celebrating God's creations, Gaudi also celebrates the beauty and variety of Nature.

The Courtyard

The courtyard of the Casa Batllo is an area which exemplifies Gaudi's attention to minor details. The wave-like walls and the lack of doors allow the rooms to flow uninterrupted into one another and finally lead outside to the courtyard. This flow seems to be suggestive of an aquatic landscape. One cannot help but be reminded of the smooth stones of a river bed when inspecting the randomly sized and toned circles of ceramic, which are distributed on the entire exterior surface of the building as well as the courtyard. The aquatic theme is further developed in the minute details.



Figure 7

Figure 7 is an image of a hexagonal, greenish grey cement block designed by Gaudi for the paving of the terrace at the back of the house. It gracefully depicts an interaction between a nautilus shell, a starfish and an octopus in low relief. Gaudi "created a pavement...able to cover an unlimited area with a continuously expanding, radiating, or pulsating skin"¹⁸. The tiles are designed so that three individual patterns are situated at three corners; this allows the eye to move ceaselessly across the surface. The tiles are an indication of

Gaudi's consideration of sea forms. In fact, the swirls of the nautilus are used as a motif. They add unity to the building and aid Gaudi in his elimination of straight lines in favour of swelling curves, which seem to characterize the sea. The recreation of a seascape through small details emphasises how sometimes, artwork is given power by a culmination of elements, not a single dominant element. Gaudi has used the flow of the walls and complemented them with beautiful floor tiling to create the sensation of being situated in a natural, underwater sanctuary.

¹⁸ Bergdoll, Barry, Dario Gamboni, and Phillip Ursprung. *From Inspiration to Innovation: Nature Design*. Zurich: Lars Muller Publishers, 2007. Page 104

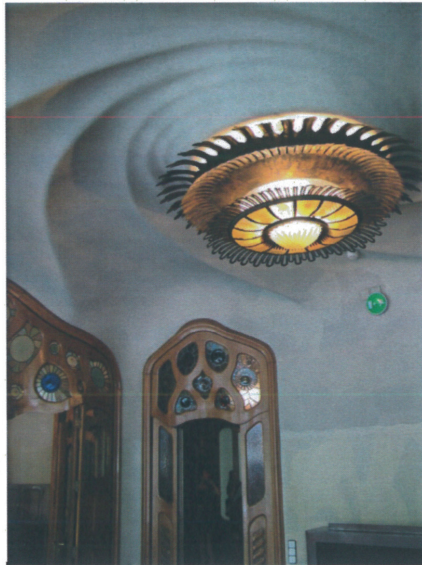


Figure 8



Figure 9

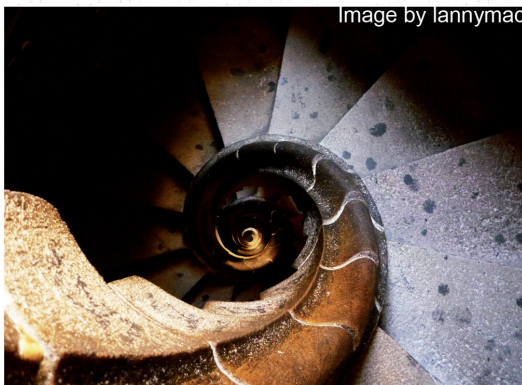


Figure 10



Figure 11

The First Floor Living Room

The living room on the first floor is a potent example of Gaudi's continuation of aquatic motifs, as well as his ability to draw from various aspects of Nature. The light fixture shown in Figure 8 is the central focus of the living room. It is given prominence through the incorporation of a whirlpool pattern reminiscent of the lines of a nautilus shell. The light fixture is complemented by the stained glass windows and doors. As shown in Figure 9 the nautilus pattern is repeated in the door frame for further emphasis of an aquatic landscape. This nautilus pattern can also be seen in Gaudi's other work such as the Sagrada Familia (Figure 10). Interestingly, in this case the nautilus motif is created by the natural winding lines of the stairs. Gaudi counterbalances the underwater motifs in the Casa Batllo with solid land forms such



Figure 12

as the fireplace which is clearly shaped like a mushroom (Figure 11). In looking at other works by Gaudi, it is apparent that mushrooms were a common floral motif. One of the pavilions of Park Guell is topped by a huge mosaic Fly Amanita as shown in Figure 12. Notably, throughout the period of the Casa Batllo's renovation, Gaudi was also working on the Park Guell. It seems reasonable to suggest that in his many surveying visits to the park, Gaudi was frequently inspired by the flora and expressed this in his work. The bold outline of the mushroom in the fireplace of Casa Batllo draws our attention to Gaudi's love of adding hints of his own personal quirkiness. The mushroom also represents primitive architectural origins that may suggest the strength of organic columns in nature. This supports Gaudi's declaration that 'trees are the strongest support'¹⁹. His recognition of the strength of trees is further evidenced by his use of arches.

¹⁹ Zerbst, op.cit., Page 208



Figure 14



Figure 13

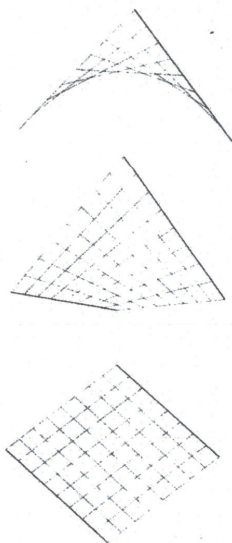


Figure 15

From looking at Figures 13 and 14, it is clear that Gaudi used the hyperbolic paraboloid (catenary arch) extensively in the Casa Batlló. Interestingly, “The hyperbolic paraboloid is a surface found much in nature (Figure 15). An obvious example is the way in which many trees develop trunks from their roots as they leave the ground.”²⁰ The shape is also similar to the forms that the webs between fingers and toes assume in tension. Structurally, the use of catenary arches is beneficial as it is “able to support more than its own weight”²¹. However, the “ideal shape for an arch that supports a large amount of weight is parabolic”²², not catenary. This implies that Gaudi decided to use the catenary arch for its naturalistic shapes and lines, rather than for its structural benefits. Artistically, the use of the arches is stunning. They allowed Gaudi create a play on light and shadow which actually creates the practical illusion of an expansive room. In addition, their bonelike resemblance echoes the strong exterior columns and creates the feeling of being inside the dragon.

²⁰ Burry, Mark. “Antoni Gaudi: Expiatory Church of the Sagrada Familia.” In *Architecture 3's - City Icons*, by Mark Burry. London: Phaidon Press, 1999. Page 11

²¹ Parker, John Henry. *A Concise Glossary of Architectural Terms*. London: Bracken Books, 1989. Page 22

²² *ibid.*



Image by Tim Bray

Figure 16

This is in contrast to the courtyard, which evokes a sensation of being underwater. Importantly, the hyperbolic paraboloid is also dominant in Gaudi's Expiatory Church of the Sagrada Família. It can be seen in Figure 16 where it plays a similar strong structural role, creating what appears to be a forest of stone. Ultimately, the first floor living room highlights Gaudi's ability to draw from his surroundings to enhance his architectural knowledge both aesthetically and functionally. Gaudi brings together somewhat unrelated organisms such as sea creatures and mushrooms and effectively integrates them under the expansive umbrella of Nature.

The Central Light Well



Figure 17

sheathing it in reflective ceramic plaques...and increasing the size of the internal windows as they went down"²³. This was further developed in the interior colour

Ceramic tiles were also integrated into the central light well, and are indicative of Gaudi's attention to the natural movement of light. The tiling in the central light well can be seen as evidence of his ingenuity and ability to combine both aestheticism and functionality. The upper walls of the central light well are clad with ceramic tiles which are cobalt blue at the top and gradually become lighter near the bottom (Figure 17). This is not only a spectacular visual statement which suggests the cool and encompassing waters of the sea, but also greatly enhances the light distribution within. In fact, light distribution was a major problem for Gaudi in his decision to keep the old house. This was due to the fact the building occupied a very narrow piece of land and thus, the majority of light came from the skylights. "Gaudi wanted to avoid the usual impression of a top lighted well and he did so by

²³ Hughes, op.cit., Page 512



Figure 18

choice. The very bright upper floors of the house are tiled with cobalt blue, whilst in contrast the bottom floor is nearly dazzling white for greatest reflection. Notably, in conformity with the gentle undulations of the walls, the tonal transition from cobalt blue to white is extremely delicate and when looking down from the top floor, the colour is almost uniform. This skilled use of colour cleverly “eliminates the impression of a dark pit”²⁴ and lends itself perfectly to the ascending spiral staircase which is almost like a fossilised central root, implanted and supporting the entire structure.

Interestingly, like the catenary arches, the staircase is a continuation of the exterior dragon spine roof (Figure 18). This is implied by the wooden vertebra which lines the steps, but also through Gaudi’s graceful manipulation of metal and wood in the handrails which are reminiscent of the balconies.

Finally, the lift in the central well is in some ways an emblem of Gaudi’s ultimate aims for the Casa Batllo. It is a vehicle that allows one to explore the depths of an aquatic world of fantasy as well as rise up towards the roof, where a cross catches the light of the rising sun. Like the pieces of a mosaic culminating to form a whole, interior and exterior elements of the Casa Batllo ultimately come together to form an expression of Gaudi’s architectural talent which is rich in not only inspiration and form, but also religious faith.

²⁴ *ibid.*

Conclusion

The Casa Batllo showcases Gaudi's skill as an artist and architect who is able to combine both functionality and aestheticism. His design of the house seems to have been greatly influenced by the intricacies of Nature, which is a reasonable claim given Gaudi's childhood and the cultural climate of the time. When the elements of the house are put together, one realises the enormity of the whole and Gaudi's ingenuity as a visionary. Gaudi's skill in extracting his imaginings of unconventional forms and actually bringing them into the physical world is amazing. In the hands of a less capable architect, the Casa Batllo could well have been translated into a feverish nightmare. Yet, Gaudi has succeeded in building a house of a magnificent scale, whose elements combine to exemplify his sublime technical, observational, and spiritual understanding of Nature. His technical and observational skill is clear in his use of catenary arches to both support weight and create the illusion of space; as well as his use of animal motifs which are even developed in the fine details of the courtyard paving. However, his spiritual connection with Nature is not immediately obvious, but is carefully conveyed in the visual language of the Casa Batllo. A house where the life and power of the sea, is contrasted with the images of a slain dragon and its victims. Apart from being an icon of Catalan achievement, and a homage to God, the house depicts Gaudi's fundamental understanding of Nature as an intertwining of life and death.

3985 words

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Images

Cover Image

Tan, Bryan. "Casa Batllo Front". Author's own photograph. Barcelona, 2009.

Abstract Image

Gogh, Vincent van. "The Starry Night." Museum of Modern Art.
http://www.moma.org/collection/browse_results.php?object_id=79802. New York, 1889.

Figure 1

Zerbst, Rainer. "Casa Batllo Front". *Antoni Gaudi*. Cologne: Taschen, 1988. Page 163
Image replaced for copyright reasons. http://commons.wikimedia.org/wiki/File:Barcelona_casa_batllo_antoni_gaudi.jpg

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Tan, Bryan. "Park Guell Gate". Author's own photograph. Barcelona, 2009.

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Zerbst, Rainer. "Casa Batllo Exterior Columns". *Antoni Gaudi*. Cologne: Taschen, 1988. Page 116
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Artigas, Isabel. "Casa Batllo Balcony". *Gaudi: Complete Works*. Barcelona: Evergreen, 2008. Page 349
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Bossaglia, Rossana. "Antoni Gaudi Chair". *Art Nouveau*. London: Orbis Publishing, 1975. Page 39

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Tan, Bryan. "Dragon Spine Roof". Author's own photograph. Barcelona, 2009.

Figure 7

Tan, Bryan. "Hexagonal Floor Tile". Author's own photograph. Barcelona, 2009.

Figure 8

Tan, Bryan. "Living Room Light Fixture". Author's own photograph. Barcelona, 2009.

Figure 9

Tan, Bryan. "Living Room Door". Author's own photograph. Barcelona, 2009.

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Zerbst, Rainer. "Sagrada Familia Stairs". *Antoni Gaudi*. Cologne: Taschen, 1988. Page 163
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Zerbst, Rainer. "Casa Batllo Fireplace". *Antoni Gaudi*. Cologne: Taschen, 1988. Page 163
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Figure 13

Tan, Bryan. "Casa Batllo Courtyard Mosaic". Author's own photograph. Barcelona, 2009.

Figure 14

Tan, Bryan. "Casa Batllo Interior Arches". Author's own photograph. Barcelona, 2009.

Figure 15

Burry, Mark. "Catenary Arches." In *Architecture 3's - City Icons*, by Mark Burry. London: Phaidon Press, 1999.

Figure 16

Artigas, Isabel. "Sagrada Familia Columns". *Gaudi: Complete Works*. Barcelona: Evergreen, 2008.

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Image replaced for copyright reasons. http://upload.wikimedia.org/wikipedia/commons/4/4d/Sagrada_Familia_interior_over_altar.jpg

Figure 17

Tan, Bryan. "Casa Batllo Central Light Well". Author's own photograph. Barcelona, 2009.

Figure 18

Tan, Bryan. "Casa Batllo Entrance Stair". Author's own photograph. Barcelona, 2009.