When confronted with the fairy tale looking church, La Sagrada Familia in Barcelona, it is hard not to associate its designer Antoni Gaudí with extravagance. However, the life and work of the architect have been romanticized enough, think experts Luis Gueiburt and Jan Molema. Behind the fantastic façades lies something more amazing they say: his mind-boggling logic.

The Catalan architect Antoni Gaudí (1852-1926) worked mainly in Barcelona. His masterpiece, the still unfinished church, La Sagrada Familia, dominates the skyline and forms the epicentre of tourism. Thousands gaze here daily at the miraculous but strange creation. "Strange for the eye maybe," states Jan Molema, "but the design of La Sagrada clearly serves a purpose."

Molema, architect and professor at the Technical University of Delft, The Netherlands, is considered a pioneer in researching Gaudí’s work. "There are no coincidences in his designs," he says, "All aspects are considered: light, light reflection, acoustics and convenience. He calculated every construction step, including the weirdest details. Sometimes I was puzzled. His logics are mind-boggling."

Luis Gueiburt is a sculptor, and also the director of the Centro Estudios Gaudinistas (CEG) in Barcelona that also researches the work of Gaudi. He backs Molema’s opinion. "His houses are very comfortable to live in. In Barcelona, for example, it doesn't rain often, we therefore seldom think in terms of rain. A lot of early houses leak when the weather is bad. But Gaudi’s houses never have any such problems, even though they are also about a hundred years old. And the few times he did create something uncomfortable it was intentional, like the church benches he made for La Sagrada. In church, Gaudi thought, you should not have a comfortable seat because it is important to pay attention to the sermon."

Gueiburt admired Gaudi’s work immediately - it was love at first sight. Molema however couldn’t stand the sight of La Sagrada but became curious when he started to discover the precision with which it was built. That curiosity resulted in a first research project with some colleagues in 1975. "We tried to discover how Gaudi’s buildings were constructed by measuring and delineating them. We tried to be engaged without losing our professional distance."

Previous investigations remained anecdotal, Molema thinks. "There are many ways to interpret Gaudi’s work. Some investigators use Greek mythology to explain his work, others the bible. And I did it with a measuring tape. Our research was seen as pioneering. Typically Dutch perhaps, that analytical approach: not being overwhelmed by design, but trying to find the essence within."

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Molema does not care much about the many stories that make a myth of Gaudi or portray him merely as a sour, eccentric yet ingenious man, living in the crypt of La Sagrada. "His architecture evokes an urge to fantasize. People don’t want to know the truth; that is just a burden. The human mind rather creates a fairy tale, some sort of universalism."

Gaudi’s death for example - historians like to say that he was run over by a tram because he refused to acknowledge improvement. Sure, it fits the romantic view better. But do you believe it? A man who was always busy trying to find new materials, who was ahead of his time; that man does not walk underneath a tram because he does not accept modern traffic."

Fellow architects aren’t always that enthusiastic about Molema’s rational approach. "Aldo van Eyck (an eminent Dutch architect who died in 1999) once said that I tried to demystify architecture. Well, he tried to mystify it, I replied. To me that is at least equally bad. I have enough common sense to realize that people interpret everything they see around them. What I do notice is a clear difference between people who are willing to analyze and those who simply take everything for granted." Gueiburt is persistent in getting Gaudi the appreciation he deserves. There is still so much work to do," says the sculptor in his studio annex office that is filled with documents on the architect. "Gaudi did not only design buildings," he says, as he pulls out a plan for an irrigation system from a pile of papers. It turns out to be a recently discovered creation that Gaudi designed in 1879, near a small town called Caldas y Montbuis. "One of his first achievements," adds Gueiburt with a sparkle in his eyes. "It was recently found in an old archive. This is of scientific value. The man was more than an architect, he was a complete artist: a painter, sculptor and scientist - like Michelangelo. Oh, furniture, he also made furniture."

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Gueiburt's organization, CEG, currently has documented 93 works, ranging from pen drawings to buildings. Gathering the information is not an easy task because most material was lost during the Spanish civil war when an incendiary bomb hit Gaudi’s studio, situated in the crypt of La Sagrada. "Only the models of La Sagrada were saved, but we keep on searching in libraries and local archives hoping to find blueprints and plans."

As a sculptor, Gueiburt renovated a lot of Gaudi’s creations since he came to Barcelona 25 years ago. "For a long time I was called upon whenever something needed repair. I could not understand why they came to me. It took me a while to realize that it was not a gift from God, but that there simply weren’t any people around who dared to do it, due to the fact that it is hard to understand Gaudi’s way of thinking."

For that same reason Molema thinks that Gaudi won’t become very influential in contemporary architecture. "If architects could understand his work more easily, they would apply his methods. That is why my research group makes an effort to understand and explain it," Molema sighs, then says light-heartedly: "Researching Gaudi is almost a religion. You have to walk for a while to see the light."

If Gaudi however does gain influence in modern architecture, Molema hopes it will be with completely different results. Because his aesthetic appreciation hasn’t changed through the years, he still does not like the sight of Gaudí creation. "I come to that same conclusion time and again. There is so much to it that I find revolting. Couldn’t he just have used some more pleasant rectangular shapes for example?"