"Conquering" the Collserola range: Modernity, Leisure and Nature

Joan Molet, Professore di Storia dell'Arte, Università di Barcellona

By the turn of the twentieth century, the *Eixample* district of Barcelona had already become consolidated as an urban space, favoured by the upper classes for constructing their new homes and joining up the traditional centre of Barcelona with some of the different villages which are dotted around the surrounding area, such as Gràcia, Sants, Sant Gervasi, Les Corts de Sarrià and Sant Martí – municipalities which, along with Sant Andreu, had been incorporated as part of the city in 1897

The expansion of the city advanced with great speed and, by 1900, the urban area started approaching what had once been a physical barrier; the Collserola hills. Now the advance was so well decided that not even this range of hills, 17km long by 6km wide could stop it. On the contrary; by the 1890s Barcelona's opinion leaders were already talking about making them part of the city, which included the idea of crossing these hills and converting them into an area for both residential and leisure use. They would achieve this using the most modern transport technology of the time and by adopting the then new concepts of both Garden Cities and nature-related leisure. The "conquest" of the Collserola hills began exactly in this way

After three decades of the construction of the *Eixample*, none of the green spaces proposed by Cerdà had been created; the new Barcelona was a dense city, comprised of closed city blocks, with no internal gardens, with no parks in any of the neighbourhoods and without the woodland areas that had been envisaged along the Besòs River… Even the only existing gardens, the *Camps Elisis*, which were privately owned and had been created before the city plan were doomed to disappear, being situated in one of the most prestigious parts of the new city… Even the first villas built along Passeig de Gràcia, which were of limited height and surrounded by gardens, were very soon knocked down and blocks of flats built in their place. Luckily, with the 1868 Revolution became possible the creation of a great park on the site of the old Bourbon fortress, something which hadn't been foreseen by Cerdà. However, despite its large size, if we compare the size of this park with the old town of Barcelona, against the expanse of the new metropolitan area of Barcelona, we can see that it was insufficient.

It is not surprising that focus was placed on the Collserola hills as the grand green space which Barcelona was missing; an extensive space which had the potential of providing suburban homes as well as leisure activities, for both gentry and commoners alike. Already during the decade of the 1880s some initial preparations had been carried out at the top of the hills: on the summit of the hill known as Tibidabo, at an altitude of 512m, the neo-gothic oratory, dedicated to the Sacred Heart, was built in 1886: this would later form the foundations of the basilica, begun in 1902. As well as this there was also a wooden pavilion, built in 1888 as a viewing point of the city for the Regent Queen, Maria Cristina, who was in Barcelona for the opening of the World Exhibition.

In parallel to this, the town of Sarrià, also situated in the Barcelona surrounds, but not incorporated as part of the city until 1921, commissioned the construction of a small reservoir on the other side of the range of hills. The reservoir, which was the work of

Elies Rogent in 1865, collected the water from some of the springs and streams below the village of Vallvidrera, transporting it to Sarrià by means of a pipeline through a tunnel which cut through the mountain. These hydraulic works marked the beginning of a second centre of later activity in the hills. Despite this, it has to be said that the true "conquest" of Collserola was led by two private companies, both set up with this specific purpose: The "Sociedad Anónima Tibidabo" (Tibidabo Limited Company) and "Ferrocarriles de Cataluña, S.A." (Catalonia Railways Limited)

1. Tibidabo Limited Company

The "Sociedad Anónima Tibidabo" (Tibidabo Limited Company), founded in 1899, was set up by the popular doctor Salvador Andreu i Grau, owner of a wealthy factory which produced pharmaceutical products. The company invested its profits in the construction industry and owned in the region of 100 blocks of flats in the *Eixample*. The Limited Company was founded to acquire the "Can Gomis" estate, occupying some 35 hectares and extending from the foot of the mountain right upto the summit of Tibidabo, as well as a further 11 smaller estates. The company planned to build two housing estates out of this land, one at the foot of Tibidabo and the other just below the summit, plus a funfair at the summit, which would have as its principal attraction the majestic views over Barcelona and the Mediterranean. The plan was to connect all of this with the city by a system of trams and funicular railways which would be powered by electricity.

The direction of the project was assigned to the Engineer Marià Rubió i Bellver, who had designed the road layout of the first housing estate and had been in charge of the infrastructure works for the funfair.

During the first phase, between 1899 and 1901, the lower part of the El Frare Blanc torrent was levelled and transformed into an ample boulevard, named "Gran Avenida del Tibidabo" (Great Tibidabo Avenue), which ran up-hill and was crossed by various horizontal streets. Adapting to the topography of the land, the boulevard then began to wind around the mountain up to the square where the lower station of the funicular railway was located. In order to aide access to the funicular railway, a tram-line was planned, which would run the length of the avenue. The tram-line, the funicular railway, the avenue and the funfair were all opened on 30 October 1901.

Comparison between the Tibidabo Avenue, Park Güell and Linear City

The construction of the Avinguda Tibidabo marked the introduction of a new urbanistic model in Barcelona, the Garden-City, which would become an alternative to the dense city which had been imposed in the *Eixample*. This brought about a new way of living to the landed classes, who, without having to travel very far from the city, were able to enjoy the advantages of living in the middle of nature. In actual fact, the idea of the Garden-City in Catalonia wasn't developed until a decade later, from 1912, when Cebrià de Montoliu published the leaflet titled "La Cuidad Jardín" (The Garden City) and founded the "Sociedad Cívica Cuidad Jardín" (The Garden City Civic Society) with the purpose of importing this type of planning to Catalonia. Bearing this in mind, we can see that the project of Doctor Andreu was really quite innovative in our country. Only one other cosmopolitan entrepreneurial figure, Eusebi Güell, shared this idea at the time; in the same year of 1899, commissioning Gaudí to design Park Güell, which can be seen as another Garden-City, also designed around a hill in the upper part of Barcelona.

The Garden-Cities of Andreu and Güell, however, were based on very different ideals. The project of Güell and Gaudí, which flopped as a business, was based on a

scrupulous respect for nature whilst Andreu and Rubió's project relied on technology and the speculation of blocks of flats.

In fact, the philosophy of Dr Andreu more closely matched the "Ciudad Lineal" (Linear City) model of Arturo Soria than the "Garden City" of Ebeneezer Howard. The common theme of the two was that of a central spine along an avenue, thus creating an elongated city (linear), formed of houses with gardens and communicated from one end to the other by a tram-line, giving residents ease of movement. The difference between the two was that Soria's idea was based on a flat plan with the objective of resolving the problems of workers' housing, whilst Dr Andreu's project was to create a luxurious neighbourhood, complimented by elegant pleasure grounds heading to the top of the mountain

1.1 The Architecture of the "Gran Avenida del Tibidabo"

The first houses to be built were commissioned by shareholders of the Tibidabo Limited Company, undoubtedly with the objective of promoting the new housing estate. The first house built was for Lluís Muntadas, Engineer and owner of the company that had installed the tram-line. The house, which is strategically situated at the end of the straight section of the avenue, on a level above the road, is the work of Josep Puig i Cadafalch and was already finished by the time of the opening of the avenue in 1901. This house is an interesting example with the first signs of, what came to be known as, the "white period" of Puig i Cadafalch, which covers the period from 1906 to 1910, when he abandoned his medieval influence, opting instead for Catalan vernacular styles, adopting the elements of the baroque 'masia' (Catalan farmhouse) such as curvi-linear padstones and the profusion of sgraffitto.

The second house was called "El Pinar" (The Pine grove), designed by Enric Sagnier for Evarist Arnús, owner of the Arnús-Garí investment bank, responsible for the financial management of the project. The *Casa Arnús* (Arnús House), which has the feel of a medieval castle with *Modernista* detailing, looks onto the square where the station for the funicular railway is situated. It is also located on the axis of the avenue, the difference being that the plot is even higher up than the *Casa Muntades* (Muntades House), such that on its completion in 1903 it became the landmark which closes and dominates the whole perspective of the development

Sagnier would later return to work on the *Avinguda Tibidabo* between 1915 and 1920, building four houses, but already more in the Noucentist style. During this earlier period, it was another architect who took the limelight; his name was Joan Rubió i Bellver, the brother of Marià Rubió, who without doubt helped him to clinch the design of the third house in the development, which was also for one of the shareholders that had funded the housing estate, Teodor Roviralta

Joan Rubió was from the group of architects who had worked at Gaudí's studio, where he passed from starting out as a simple helper to later become one of the most important partners, specialising in structural calculations. The collaboration between Gaudí and Rubió ended in 1905 over differences of opinion in relation to the construction of the *Casa Milà* (Milà House). In spite of this, the fingerprints of "the master" remain visible in the work of Rubió, as can be seen in the works completed on the avenue

The *Casa Roviralta* (Roviralta House) is the fruit of an adaptation of a *masia* (Catalan farmhouse) carried out between 1903 and 1913. It had been owned by the Dominican Order and was known as the "Frare Blanc" (The White Friar). The structure and the layout of the original house were conserved, but the distribution of the rooms was

changed and new spaces were added, such as the attic and the oriel window, looking onto the garden. Rubió paid special attention to elements involving craftwork, above all fair-faced brickwork, a simple material, typical of traditional building, which stands out over the white façade. The brickwork gives a chromatic distinction to the new additions, singling out the attic and the oriel window from the original structure and acting as a decorative element to the exterior, giving a certain geometry to the elevation. It is also worth pointing out the weight provided by the eaves, an important detail in traditional Catalan building, and also the solution given to the attic, built as open galleries and reinterpreting the Catalan Gothic-style. Rubió also managed to include the typical "trencadis" (broken tiles), introduced by Gaudí, in his design.

Very close by, and in the very same year of 1903, Rubió designed the *Casa Fornells* (Fornells House) on the Medievalist lines of Catalan Art Nouveau, also emphasising fair-faced brickwork, which in this example covers the whole façade. Also notable is the tower built above the hall, of North-European influence, following the fashionable Gothisism that had been introduced by Joan Martorell i Montells and Josep Puig i Cadafalch

At the *Casa Casacuberta* (Casacuberta House), also built by Bellver between 1907 and 1908, the architect was presented with a triangular site on a bend in the road.
The plot was situated on a level above the avenue, so a retaining wall was needed; this would act as a façade at street level. Bellver worked with this limitation to design one of the more interesting retaining walls in the development, which included a combined party wall with a fair-faced brick wall which he pulls off majestically. The wall is reinforced by a "gothic" arcade, which is interrupted by the access to the garden, where he applies the expressive possibilities of brick-construction, such as salomonic columns and false arches of brickwork, typical of Gaudí in his earlier years, when he was influenced by neo-Moorish eclecticism

This actual house provides a marked combination of volumes, capped by the great eaves which are to be found at the different levels of the house. The frames of the openings and the design of the balustrades lack geometric simplicity, which gives this house a hint of Secessionist styling.

The house of Ignasi Portabella should be added to the list of earlier buildings along the *Avinguda Tibidabo*. This house was built in 1905 by Master Builder Josep Pérez i Terraza and is of a more traditional shape but with some most sumptuous Modernista detailing, such as irregular cladding, sculptural decoration with ciclopic plant forms, combined with medieval detailing which frames openings and the undulating form of balconies and balustrades. Notable also are the Symbolist–style paintings at the top of the façade, by an unknown artist, which depict the four seasons. Pérez Terraza was one of the last generation of Master Builders, a profession that adequately covered the construction needs of the city, until 1871 when the opening of the *Escola d'Arquitectura de Barcelona* (Barcelona School of Architecture) heralded the closure of the School of Master Builders.

The final building that we will comment on from the "Modernista" (Art Nouveau) period of the *Avinguda Tibidabo* is the grand development comprising the *Hotel Metropolitan*, built between 1906 and 1918 by the Architect Adolf Ruiz i Casamitjana right at the beginning of the avenue.
The hotel is distinguished by its circular tower, located at the angle of the façade and crowned by a large turret, covered in ceramic and mosaic tiles, making it the most noticeable feature of the building and lending the current name "La Rotonda" (the rotunda). The facades were intricately decorated by motifs inspired from the medieval World, in the characteristic fashion of Catalan Art Nouveau, majestically combined with

more universal “Art Nouveau” details, with the habitual use of the applied arts, above all ceramics, mosaic and decorative metalwork.
The terraces are particularly interesting, where the design of the turret is echoed with a large array of blind arches, pinnacles and other crowning details, echoed as much in the balustrades around the terraces as the structural elements above them; these were all very much Gothicised. Just below these balustrades, there were large mosaic panels depicting various sporting scenes, which were evidence of a totally new concept at the time. Unfortunately, this rich decorative array, which included the work of Lluís Bru, the great mosaicist of Catalan Art Nouveau, was lost when the terraces were remodelled. Although the overall layout was respected, this meant that the balustrades, the terraces and the Gothic detailing of the attics were all removed

As we have already mentioned, the sporting themes of the decorative murals of the hotel, draw our attention to a very modern concept of leisure. The appreciation of nature and the contemplation of landscapes, something that had been an introspective activity for the Romantics and a scientific one for the Realists was now to become a tourist activity thanks to the comfort afforded by funicular and chain-driven trains. In this context, one of the principal attractions of this hotel was exactly this possibility of climbing so effortlessly to the top of the hill to enjoy the funfair and the magnificent views over Barcelona or simply of walking through the woods of Collserola

1.2.The Funicular Railway and the Funfair

We have already talked about the tram-line that, at its highest point, connected with the funicular railway that took passengers to the summit of Tibidabo in 9 minutes. The Tibidabo funicular railway was pioneering in that it was the first to be constructed in Spain. The idea was brought from Switzerland, a country that had been quick to see the possibilities for walking tourism, and where the Giessbachbahn, the first funicular railway in Europe, had been built in 1879. In fact, the Tibidabo funicular railway, designed by the Engineer Bonaventura Roig i Queraltó, was constructed using helvetic technology, which might explain the unusual appearance of the stations, imitating Swiss chalets.

Although the funfair was opened in 1901, attractions were still being added during the first decade of the Twentieth Century. By 1912, the park was already served by the restaurant, the hotel, the casino and the ballroom, but the only actual fairground attractions were the “target practice”, the messenger pigeon station; a “Great Telescope”; a skating rink; a space dedicated to exhibiting photographs, with a large “electric light projector”; a miniature-railway; machines which measured the force of the fist and the hand; a gramophone and the “grotesque mirrors”. The larger rides: the hanging-train, the observation tower, the captive-aeroplane were installed in the years 1915, 1921 and 1928 respectively. We note that each of these grand engineering works were oriented to make the most of the magnificent views that the mountain has to offer, views that can also be seen from the old queen’s pavilion, which was moved to a site beside the upper station of the funicular in 1903

The *Gran Restaurant Tibidabo* (Great Tibidabo Restaurant) was built in front of the station of the funicular in 1903. This is a building of Arabic influence, in which concerts were also held and which also had a tower, serving as a “public viewing tower”

A few metres away, there was the *Hotel-Restaurant Coll*, the result, in 1908, of the extension of another establishment dedicated to the serving of food, quite simple called “Can Coll” (Coll’s place). The new building was clearly *Modernista*, with great oversized arcades at ground level and the typical stylised medievalist repertory on the upper levels

The system of terraces and retaining walls was designed by the company's head Engineer, Marià Rubió, beneath which the casino, finished in 1909, and the ballroom, finished in 1912, were located. These are buildings that adapted to the orography of the land, in which the emphasis is placed in the interior, the exterior being resolved simplistically with a masonry finish, which blends into the mountain

On the same lines of the elegance that is traditionally apparent in this type of establishment, the interior of the casino was sumptuously decorated, combining an academic architectural language with a demonstration of the applied arts in true *Modernista* style, as can be seen in the grand staircase, the floral balustrade, decorative timber ceilings and stained glass. We also note the plasterwork, the Aestheticist wall paintings and the geometrically shaped furniture.

The function room is decorated on the same lines and is lined with a brick ceiling, paintings in large format and plasterwork with vine motifs, a theme which is continued within the stained glass.

More sombrely decorated was, what was known as, the "American bar", with half-ionic columns and curved wooden furniture typical of Viennese origin, on the lines of the *Thonet* factory. The idea of the "American Bar" as opposed to the more traditional cafeteria or the more modern beer-house also gives the room a novel touch.

2. Other initiatives at the summit of Tibidabo

Owing to the ease of access brought by the construction of the funicular railway, other buildings, of varying character, were also built at the summit of Tibidabo. On the one hand, the *Sociedad General de Aguas de Barcelona* (Barcelona Water Corporation) mounted a grand water deposit, a "water tower" next to the funfair grounds, serving the part of the mountain between Tibidabo and Vallvidrera, finished in 1905 by Josep Amargós i Samaranch. Despite its "industrial" character, it is an elegant structure, combining stone and brick. It blends in visually with the buildings of the fairground, especially the restaurant tower.

En 1903, Mercedes Pastor de Cruïlles commissioned a family home from Josep Puig i Cadafalch on the face of the summit that looks towards the county of the Vallès. Adhering to his medievalist lineage, Puig created the house in the style of the Catalan palaces of the Fifteenth Century, with three-arched windows, great projecting eaves, a typical open gallery and a tall observation tower. Noteworthy is the finish of the façade, especially the herringbone brick adornment.

A little further down from the summit are two structures of scientific character. The first is the *Observatori Fabra* (Fabra Observatory), the brainchild of the astronomer Josep Comas i Solà, and forming part of the *Reial Acadèmia de Ciències i Arts de Barcelona* (The Royal Barcelona Academy of Science and Art). The initial intention was to site this at the summit of Tibidabo, but the construction of the *Església del Sacrat Cor* (The Church of the Sacred Heart) and the funfair meant that a site a little further down had to be found.
The observatory also benefited from the presence of the funicular railway, being served by its own dedicated intermediate station.

It was designed by Josep Domènech i Estapà, an architect bridging the Eclectic and the *Modernista* period, who, being influenced by the "academic" use of the building, utilised a more serious language; adopting a "Neo-Egyptian" portico, but with a shape that lends itself to the distribution of the interior spaces, which met the specific needs of

an observatory of astronomy. The detailing is not exactly "classical", but is deformed in such a way that gives it the "organic" characteristics typical of "Art Nouveau"

Next to the observatory the *Gabinet de Física Experimental Mentora Alsina* (The Mentora Alsina Cabinet of Experimental Physics) was built in 1905. This was originally the home of Ferran Alsina i Paellada, the industrialist and politician, who had built up an important collection of scientific apparatus, connected with mechanics, acoustics and electricity at the house. In 1907, this house collection was opened to the public and, on Alsina's death in 1908, it was donated to the *Ajuntament de Barcelona* (Barcelona City Council). This building follows the typical medievalist wave, so characteristic of Catalan Art Nouveau

The presence of this house on the hillside is evidence of the plans of the "Tibidabo Limited Company" to develop the whole face of the hillside, not just the lower part. The funicular railway was the launch-pad of this expansion, but in order to make the areas not served by the funicular railway accessible, the tram-line was extended as far as the village of Vallvidrera in1905, with a section of about three kilometres in length which ran through most of the land owned by the company, affording access to the plots farther away from the funicular railway stations, and terminated at a centre of population that had upto that point not been well communicated with Barcelona. This tram-line marked the beginning of a network that would have to serve a large part of these hills, also connecting with the village of Sant Cugat on the other side of the hills. These plans for expansion towards Vallès County were slashed by the competition, *Ferrocarrils de Catalunya* (the Catalonia Railway Company), leading to the intensified occupation of the summit of the mountain, starting work on a second "Garden City" on the edge of the park

This new housing estate, called "Colònia Tibidabo" (the Tibidabo Colony) was basically comprised of Summer houses and was designed by the Architect Arnau Calvet. The buildings on this estate were generally built between 1910 and 1920 and the majority are the work of the Architects Josep Masdeu and Alfred Paluzie. These are more modest houses than those we have seen on the *Avinguda Tibidabo* and demonstrate a mixture of volumes, the use of decorative brickwork and geometric styling

3. The "Sociedad Ferrocarriles de Cataluña" and the Vallvidrera hillside

Vallvidrera had been the only inhabited village on the top of Collserola, situated just above Sarrià. It became part of this municipal council in 1890 and then part of Barcelona in 1921 with the integration of Sarrià

Seeing the potential for a an area of leisure on the banks of the already mentioned Vallvidrera reservoir, Heribert Alemany presented a project which he literally called *Lake Valley*, which he hoped would transform the banks of the reservoir into an area dedicated to pastimes, where, apart from footpaths with benches, the electrical illumination of the woods was planned, converting them into a tourist attraction

However, the key of the whole project was to make use of the tunnel that had been dug beneath the hills to carry the water pipeline to lay a small train-line which, in very few minutes, would travel from the upper side of Sarrià upto the banks of the reservoir. The train, which in the end was the only part of this ambitious project to be carried out, was constructed by the Engineer Carles Emili Montañés and was first commissioned in 1908 under the name "Mina Grott". It ran along a track 600mm wide and was powered by electricity, which was also used to illuminate the tunnel; which was another interesting aspect of the design

Parallel to this, in 1906, the *Ferrocarril de Sarrià* (Sarrià Railway) company launched the Vallvidrera funicular railway, which further improved access to and from the village and became the direct competition of the tram-line which had been opened by the Tibidabo Limited Company in 1905

The two terminal stations of the funicular railway, the work of the Architects Arnau Calvet and Bonaventura Conill, are very interesting.

These stations are nothing like the "Swiss chalet" stations of the Tibidabo funicular railway, these being fully *Modernista* in style, mixing influences from Gaudí, such as parabolic arches in fair-faced brickwork, with a typically Viennese language, such as the mix of cubic volumes, vegetable decoration and plain square-tiled friezes. These two stations represent the most unmistakeable examples of Secessionism in Barcelona, this branch of Art Nouveau being more common in summer homes outside the city.

In 1905, the railway from Sarrià to Barcelona was renovated. Firstly and foremost, it was electrified, making it the first electric-railway in Spain. In addition to this the gauge of the tracks was altered to match the International-gauge. Also, in this same year, work was begun to extend the line to the foot of the Vallvidrera funicular railway, this section being opened shortly after the launch of the funicular railway.

In 1912, the company "Ferrocarriles de Cataluña, S.A." (Catalonia Railways Limited) was founded. This new company was set up to extend the old Sarrià train-line, which it had acquired, as far as Terrassa and still further to the French border via Berga. In doing so, it was hoped to connect the free-port of Barcelona with France by an International-gauge railway, which would have made the transport of goods more straightforward, avoiding the need to change lines at Port Bou

The first expansion towards Vallès County involved the construction of a tunnel beneath Collserola, with stations near to the Vallvidrera reservoir and the area of Les Planes. The opening of this first section in 1916 saw the closure of the "Mina Grott" and the modification of the station at the foot of the Vallvidrera funicular railway, so allowing the continuation of the line through the new tunnel

The opening of the tunnel, one-and-a-half kilometres long and wide enough for two International-gauge tracks, should be considered as a formidable engineering feat, for which the help of the builders of the Simplon Tunnel, beneath the Alps, was enlisted. With the new tunnel came not only the leisure area around the Vallvidrera reservoir became accessible to the people of Barcelona, but also Les Planes, also of simple character. This meant a significant advance for the living conditions of the working classes, who since 1904 had enjoyed the legal right to a Day of Rest on Sundays. The success of this new train service is absolutely apparent when we see that 5 Million passengers were carried before the opening of the new section, whilst after this figure rose to 10 Million

The station of Les Planes is also a small Secessionist jewel in the middle of the Vallès woods. Unfortunately nothing is known about its designer.

4. Conclusion

The projects begun in the early 1900s in the Collserola hills marked a giant step forward for the modernisation of the city of Barcelona, providing it, in a short number of years, with new urban areas which were born out of a new philosophy that was very different from the one that had been applied to the *Eixample*. These areas of leisure,

both for the benefit of the landed and the working classes, were conceived to enable contact with nature and promote the appreciation of landscapes. New means of transport were introduced, never before seen in this country, and the old Sarrià railway was extended and modernised by electrification. All of this was achieved by balancing a harmony between technology and beauty under the stamp of *Modernista* architecture, which too was being renewed by the influence of the Viennese Secession.