THE COLLOTYPE, THE AUTOMOBILE AND ELECTRIC LIGHT: THE VARIED PASSIONS OF EMÍLIO BIEL IN PORTO

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Biography

Karl Emil Biel, born in 1838, left his home in Annaberg in Saxony in 1857 and travelled to Portugal as a representative of the trading firm Henrique Schalk. He firstly settled in Lisbon before moving to Porto, the capital of the north, in 1860. Here he initially also worked for Schalk, as well as representing other German companies. In 1864, he set up his own factory which manufactured buttons and other metal products (Baptista 2010: 111).

Biel followed the development of innovative technologies with great enthusiasm, including the collotype process. It would appear that he learned the technique from Émile Jacobi, who came to Portugal to set up a collotype workshop for Carlos Relvas (Wegemann 2013: 18). Around 1874 Biel acquired Casa Fritz, an existing photo studio on the Rua do Almada, which he later renamed Casa Biel. As early as 1876, he was appointed court photographer and began to showcase and publish photo albums and other illustrated works. His pictures won him numerous medals at various international exhibitions.

In 1880 he married the daughter of the German Consul in Porto, Edith Caroline Katzenstein, who died two years later from tuberculosis, leaving behind a daughter. By this point, he had already fathered three sons, who would later work in his companies.

Alongside his passion for photographic processes, Biel also had a keen interest in the generation of electrical power. He worked as a representative for the Nuremberg-based company Schuckert (later Siemens) and was the first person to provide Porto with electricity, initially in several factories. His own photo studio and workshop had an electricity supply as early as 1891, which allowed him to extend his opening hours and take photographs using artificial light. Again in step with the technological advances of his day, he started importing automobiles by Benz and other companies to Porto.

With such a range of entrepreneurial activities, it soon became necessary to create two separate businesses: the company Emílio Biel and the Sociedade Emílio Biel & Ca. Biel’s sons each managed their own divisions in the company Emílio Biel. Júlio Emílio Biel, who was an engineer, was placed in charge of electrification; Emílio de Almeida Biel was responsible for import business.

The operations of Sociedade Emílio Biel & Ca. were divided into two divisions. The first comprised photography, collotypes and lithography. Photographer Fernando Brütt joined the division as an associate. The second division focused on publications and Cunha Moraes, also a photographer, joined as an associate (Baptista 2010: 114-115).

After the outbreak of the First World War, all German citizens in Portugal were viewed as enemies. In 1916, after Germany declared war on Portugal, the government seized all property belonging to Germans and put it up for auction. Emílio Biel died in 1915 and his legacy, which included 100,000 photographic negatives, was also affected by this measure.
Construction of the Dom Luís I Bridge (Porto) (between 1881 and 1886)
Work and impact

Records of foreign photographers working in the Iberian Peninsula, initially as travelling photographers, date back as early as 1843. In May and September 1845, the journal *O Periódico dos Pobres* mentions three photographers in Porto (Siza 2001: 5). The first permanent photo studios were not set up until the 1850s. Miguel Novaes founded the first studio in 1854, which stayed in business until the end of the 1860s (Baptista 2010: 54). Emílio Biel almost certainly acquired *Casa Fritz* – a photo studio founded by Joachim Friedrich Martin Fritz – before 1874. By 1876 Emílio Biel already had nine employees working under him. That year, Fernando Brütt joined the company as an associate (Baptista 2010: 119-120). The studio operated under the name of Fritz until 1890 when it was renamed *Casa Biel*. By 1891 the company had celebrated its 50,000th photograph (Baptista 2010: 123). However, photography was not *Casa Biel*’s only source of profit. It also generated income with its postcards produced using the collotype process: “The whole of Portugal is scrambling to get copies of Biel’s postcards. Their pleasing motifs appeal to one and all” (Wegemann 2013: 19).

Biel’s fascination with new inventions and technological advances had a major influence on the themes and motifs he chose to photograph. For example, he captured on film the construction of both of Porto’s bridges, Ponte Dona Maria Pia (built between 1875 and 1877) and Ponte Dom Luis (built between 1881 and 1886). As early as 1876, he published *Caminhos de Ferro do Norte Ilustrado*. A large selection of his photographs depicting the railroad, as well as portraits and landscape scenes, were published in the cultural journal *O Occidente*, which was established in 1878 and won an award at the world fair in Paris that year. By 1899 more than 100 illustrations had been produced using photographs from *Casa Biel* (Baptista 2010: 129). The journal was illustrated exclusively with engravings. These were based on drawings and increasingly on photographs. In its fifth year, *O Occidente* featured the work of *Casa Biel*, including two images of a mechanical lift in Braga, published under the company name *Casa Fritz*, and several images of railroad bridges and station buildings¹ (Biel 1882: 101, 244, 245). A number of railroad photographs produced by *Casa Biel* appeared in albums as part of the world fair in Chicago in 1893. In the run-up to the fair, the *Associação de Engenheiros Portugueses* asked various photographers to submit their work, including Bobone, Camacho, Relvas, Ronchini and Biel. This resulted in three albums: *Caminho de Ferro Português da Beira Alta*, *Caminho de Ferro do Douro* and *Caminho de Ferro do Minho*.²

Another popular motif in Biel’s photographs, collotypes and publications was the artistic and cultural history of Portugal, the land he had made his home. As early as 1877, Biel began preparations to mark the 300th anniversary of the first edition of *Os Lusíadas* by Luís de Camões with a luxury edition which was published in 1880 and dedicated to Emperor Pedro II of Brazil. This publication also used photographs merely as a basis for the engravings which illustrated the edition. The first major work to include actual images taken by *Casa Biel* was the catalogue accompanying the exhibition *Exposição Distrital de Aveiro em 1882*, published by Grémio Moderno in 1883. It featured texts by Marques Gomes and Joaquim de Vasconcelos and 47 collotypes, 45 of which depicted exhibits, plus two views of the city of Aveiro. *Casa Biel* shouldered the risk of this venture, having produced the collotypes without any guaranteed profit. The catalogue is viewed as a milestone for *Casa Biel*, as the company installed the technical infrastructure necessary for industrial photomechanical production (Baptista 2010: 127).

In 1885 *Casa Biel* was thus equipped to produce the collotypes for the four-volume work *A Africa Occidental, Album*
“D. Maria Pia Bridge (Porto)” (between 1875 and 1877)
photográfico e descriptivo da Africa Occidental, which were made using photographs by José Augusto da Cunha Moraes and once again demonstrate Casa Biel’s outstanding work in the field of photomechanical printing.

From the 1880s, the use of collotypes in Porto for commercial purposes became increasingly common and Casa Biel took on commissions from fashion houses and produced calendars and exhibition catalogues. In addition to these projects, it also compiled several other important photo books, such as Viticultura e Vinicultura in 1896, featuring 22 collotypes by the studio, and O Minho e as suas culturas in 1902, featuring 39 collotypes by Casa Biel (Baptista 2010: 149).

At the start of the 20th century, Casa Biel was once again focusing its energies on developing an epic work: A Arte e a Natureza em Portugal, which was published between 1902 and 1908 in eight volumes and “aimed to create the most comprehensive archive available on our artistic and natural wonders” (Brütt/Cunha Moraes 1902: page unspecified). It has often been cited as Casa Biel’s most important work:

A Arte e a Natureza is undoubtedly Emílio Biel and Cunha Moraes’ most ambitious undertaking: the eight-volume publication abounds with views of cities, monuments, landscapes, picturesque scenes, working processes and typical traditional dress. The technical quality of the images is superb. Coupled with excellent texts (in Portuguese and French) by various authors, which describe all of the places, cities and landscapes, this work is far more than a mere collection of stunning photographs – it is a comprehensive and precise record of Portugal and its treasures.

(Wegemann 2013: 24)

The publication Arte religiosa em Portugal, which came out in 1914 in monthly fascicles, placed a special focus on Portugal’s religious art, featuring photographs from Casa Biel and texts by art historian Joaquim de Vasconcelos.

Casa Biel was regarded as one of the top photo studios and one of the leading collotype workshops in Porto in the 19th century and the start of the 20th century. Emílio Biel always ensured that his studio had state-of-the-art equipment, enabling it to produce outstanding artistic work. Casa Biel’s participation in national and international exhibitions and the awards it won at these events demonstrate the outstanding quality of the studio’s work, which is still a key reference point in Portugal for the early era of photography and the collotype process.

Casa Biel was also recommended to German-speaking travelers. Emílio Biel’s company featured in both Baedeker, published in 1912, and Großer illustrierter Führer durch Spanien und Portugal (Major illustrated guide through Spain and Portugal), published in 1892 (Baedeker 1912: 530; Hartleben 1892: 496).

A visual record of technological innovation

The work of Emílio Biel and other pioneers of photography in Portugal focused on the modern buildings and technical structures emerging in the 19th century and the start of the 20th century, which were possible thanks to the innovations of that period. Cultural journals such as O Occidente and Ilustração Portugueza featured many of these images. It would be interesting to examine these publications in order to understand how their texts and above all their images gave the general public who purchased the journals a better understanding of the technological advances of that time.
“Traditional dress: Penafiel” (est. between 1902 and 1908)
Collections

The holdings of the Ibero-Amerikanisches Institut (Ibero-American Institute, IAI) contain 29 photographs by Emílio Biel. Unfortunately, it is no longer possible to establish how the IAI acquired the images. The pictures depict a variety of subjects, ranging from the construction of the Dona Maria Pia Bridge and traditional dress from the north of Portugal, to street scenes in Porto. The IAI is also home to some of the most important works published by the company Emílio Biel, such as the luxury edition of Lusíadas from 1880 and A arte e a natureza em Portugal, which came out between 1902 and 1908, as well as the journal Arte religiosa em Portugal from 1914. Furthermore, all editions of the journal O Occidente are available at the IAI.

The Centro Português de Fotografia (CPF) in Porto, which was founded in 1997, houses an extensive stock of photographs by Emílio Biel, along with information on the photographer. The homepage of the CPF features 145, freely accessible digital copies of Biel's photographs. The center’s library also has additional material on Emilio Biel and his oeuvre.

1 The first railroad photographs, which were used as a basis for illustrations in O Occidente, were taken by F. Roncchini in 1878.
2 Unfortunately, the albums were not completed in time for the world fair in Chicago.
3 Revista Pittoresca e Descriptiva de Portugal com vistas Photographicas by Possidónio da Silva, dating from 1862/63, is thought to be the earliest publication on Portugal’s cultural heritage which was illustrated using photographs. As far back as 1883, Emilio Biel had already planned to compile a publication with the working title Portugal antigo e moderno, which would be illustrated with approx. 800 collotypes. However, he did not manage to realize his vision.
4 As in earlier editions.

Bibliography

Biel, Emílio (1882): “Caminhos de ferro portuguezes”. In: O Occidente, 5, 138, 244-245.
“Traditional dress: Porto” (est. between 1902 and 1908)
Rua Nova dos Ingleses (renamed Rua do Infante D. Henrique in 1883) (before 1883)
“Trinity Church (Porto)” (year unknown)