

# THE “ANIMATED POLYSTEREOSCOPE” OF FRANCISCO DALMAU

## INTRODUCING STEREO PHOTOGRAPHY IN BARCELONA THROUGH OPTICAL SHOWS (1853-1863)

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### Abstract:

This paper is intended to give an example of the impact of optical shows in relation to the dissemination of stereoscopy in Spain. Concretely, I will be focusing on a stereoscopic show run by the optician Francisco Dalmau, established in La Rambla in Barcelona, which remained open from 1853 to 1863. Evidence seems to point to the fact that it was the first time that stereo photography was presented as part of an optical show in the city. By analyzing this case, I will attempt to illustrate the visual novelty, the level of acceptance and then great popularity of the stereoscope compared to other entertainment in this period. Finally, I will present new data concerning a stereo photography studio that Dalmau opened in 1854.

**Keywords:** *Francisco Dalmau, Barcelona, Stereoscopy, Stereoviews, Optical shows, Optical cabinet*

Stereo photography arrived and spread across Spain mainly due to the presence of foreign photographers in the territory. Likewise, thanks to the role of the daily press and scientific literature, spectators were well informed about the advances in this technique. Its inclusion in itinerant optical shows and other forms of entertainment were also a key factor that contributed to its general diffusion (Fernández Rivero, 2004). However, with the exception of a few references (*Idem.*, Garófano, 2007), little has been said or written about these shows. Moreover, as Rivero emphasizes, there is still very little data available on the role of local actors in the diffusion of stereoscopy in Spain, “making any example that we can document even more valuable and that is why it is absolutely necessary to complete this part of the local photo-histories” (2015: p. 21).

This paper has the double objective of casting a new light on one of these local photo-histories while at the same time paying attention to the role of optical shows in the dissemination of stereoscopy in the specific case of Barcelona<sup>1</sup>. Concretely, I will be focusing on a stereoscopic show run by the optician Francisco Dalmau, established in La Rambla, which remained open from 1853 to 1863. Evidence seems to point to the fact that it was the first time that stereoscopic photography was presented as part of an optical show in the city. This new

device soon attracted the attention of spectators and citizens who, for the most part, had not had the opportunity to experience the enchantment of images in three-dimensional depth before.

### Francisco Dalmau, an Optician between Science and Spectacle

Francisco Dalmau (Manresa, 1810 - Barcelona, 1886) was an active figure in nineteenth-century Barcelona, whose work played a decisive role in the modernization of the industrial, commercial —and visual— landscape of the city. Dalmau’s firm imported the first Gramme dynamo, created the first electric company in the country, and introduced the telephone and the phonograph in Spain, to name just a few of his numerous contributions (Sánchez & Lusa, 2009). Considered to be the first modern optician of the city, the historiography of science has documented his career and recognized his legacy (Cabana, 1992; Maluquer de Motes, 1992; Sánchez, 2006; Sánchez&Lusa, 2009), while his interest in optical shows has remained unexplored until recently.

In 1843, Dalmau opened his first cosmorama show, and soon enough, he launched an Optical Cabinet, a room in his shop

1) The project “Entre Ciutats” (HAR 2016-78745-P) by the Gracmon research group in the University of Barcelona that gave rise to these results has the support of a fellowship from “la Caixa” Foundation (ID 100010434). The fellowship code is LCF/BQ/DE17/11600016. This research has also been possible thanks to the Avenir scholarship from the French Embassy in Spain for the academic year 2016-2017. This research has been carried on the Arxiu Històric de la Ciutat de Barcelona (AHCB), the Arxiu Fotogràfic de la Ciutat de Barcelona (AFB), the Reial Acadèmia de Ciències i Arts de Barcelona (RACAB), the Arxiu Municipal Administratiu Contemporani in Barcelona and the Museum of the Cinema in Girona, who has kindly allowed me to consult the stereo-views collections and their stereoscope devices. I am also grateful to Antonio Escubedo and Maria Assumpta Garcia for showing me around their impressive collection, and to Miquel Planchart, who has listened to my questions and shared his insights on the subject with me. Finally, I would like to thank professor Jesús Sánchez Miñana and Guillermo Lusa Monforte for sharing their previous research on Dalmau with me.

specially conceived for exhibiting, programming and organizing spectacles focused on new optical devices. Far from being an isolated case, Dalmau’s move can be compared to the career of the optician Philipe Carpenter, who presented the magic lantern, solar microscope and cosmorama shows in his shop in 24 Regents Street in London during the 1820s (Roberts, 2016, 2017). In Barcelona, the optician Felipe Maglia had previously featured a cosmorama room during the 1830s and could have introduced Dalmau to the optical field (Sánchez & Lusa, 2009: p. 92). Later on, the optician Luis Corrons and the firm Taylor & Lowe, both established in La Rambla, also offered optical amusements, following in Dalmau’s footsteps (Sánchez, 2006: p. 170). Cosmoramas, polyoramas and all kinds of optical boxes and magic lanterns, as well as telegraphs, electric machines and later on, the previously mentioned phonograph, were all first exhibited in Dalmau’s optical cabinet. It was indeed in this media context that the stereoscope was presented to Catalan spectators one day in September 1853.

### **The Animated Binocular Polystereoscope of Mr. Dalmau**

“The new *Animated Binocular Polystereoscope* of Mr Dalmau. On the basis of the ordinary stereoscope whose merit and wonderful effect has been extensively praised by several newspapers, both national and foreign, Mr Dalmau has built his brand new animated *polystereoscope*, with a new and elegant form. By means of a simple mechanism, he has succeeded

in animating its beautiful pictures with the liveness of color, not to be found in the monotonous pictures taken by the daguerreotype. They produce several light effects, imitating the different atmospheric variations of the day and the night, and thus producing always new and varied effects and a complete illusion”<sup>2</sup>

Spectators could enjoy such spectacle every day until 9 o’clock in the evening for the price of two *reales de vellón* (Figure 1). Interestingly, it clearly demonstrates that the new stereo show included dioramic effects from the very beginning. The device is described as “a medium sized box with two spy-glass tubes that require the use of both eyes”, with different integrated openings allowing for the entrance of light (*El Áncora*, 20-IX-1853: p. 1300). Both the Brewster and the column viewer models were quickly adapted to the visualization of such effects (Figure 2), and, later on, devices for collective viewing were able to reproduce the passage from day to night with the help of a light point installed inside the machine. And yet, how these first stereos were produced or where Dalmau acquired the stereoscope remains unclear. Did he build the stereoscope himself in his atelier as the announcement seems to suggest?

Considering that the French *tissues* were commercialized in 1855 (Fernández Rivero, 2004: p. 114), he seemed to be way ahead of his time. The audience of the optical cabinet was well-acquainted with the dioramic effects thanks to previous shows. They had experienced the transition from the day to the night in the dissolving views shows presented in the Optical Cabinet between 1845 and 1848. They had also enjoyed the optical views’ “double light” effect featured in the polyorama spectacles<sup>3</sup>. Regarding optical views, we know that Dalmau had previously collaborated with local artists to provide

his cosmorama and polyorama shows (Cuenca, 2018). Were these first stereo views also locally manufactured?

That same year, the Napoleon house opened its doors in the Rambla de Santa Mónica nº 17, run by the couple formed by the photographers Antonio Fernández and Anaïs Tiffon (García Felguera, 2005). On the back of some of their first daguerreotypes, though not dated, one can read the inscription “we make stereoscopes” (*Idem.*: p. 313). On the other hand, the French photographer François Alexandre Gobinet de Villecholle, known as Franck, established in La Rambla del Centro nº 18 since 1849, seems to have been the first to make stereoscopic images in the city. Fontanella (1981, p. 50) dates one of his stereo daguerreotypes back to 1851. Drawing from this fact, and considering its close relationship with the Paris scene, Rivero points out that he could have introduced the stereoscopy practice to Barcelona, “becoming one of the first stereo daguerreotypist operating in Spain” (2004: p. 117). Finally, the photographers Moliné and Albareda started offering stereoscopes around 1856 (Rivero, 2010: p. 69). Barcelona is therefore considered –as well as Seville– to be one of the first Spanish cities to have offered the three-dimensional plates within its photographic panorama (Rivero, 2004: p. 118).

Besides these facts, we still know very little about the place that stereoscopic photography occupied within the commercial offer of the aforementioned workshops, which represent the first generation of permanent and locally-based photography studios in Barcelona (Fernández Rius, 2011). Neither have

2) *Diario de Barcelona*, 18-IX-1853: p. 6641. Also reproduced in *El Áncora*, 21-IX-1853: p. 1328; 1-XI-1853: p. 486.

3) See for instance the description of the new polyorama published by *El Sol*, 1-XI-1850: p. 1240; also quoted by Sánchez, 2006: p. 161.

we been able to determine if there existed any commercial relationship between them and Dalmau's stereo show.

On the other hand, Dalmau could also have acquired the stereoviews abroad. In June 1853, Dalmau had already expressed his desire to renew his show while he was presenting a *diorama polióptico* in Valencia (Pinedo, 2004: p.128). It seems to have been an optical box featuring views with luminous effects representing the decorations and celebrations that took place in Barcelona in honor of the birth of the Princess of Asturias. In July, he was still showing it in Barcelona (*El Áncora*, 21-VII-1853: p. 336). Thus, it is possible that he may have made a trip to acquire the first stereoscope in August. Furthermore, that same year, he travelled to London at the end of October (Pinedo, 2004: p. 128), where he could have increased his collection of views and eventually bought a second stereoscope.

During the following days, *El Áncora* published a chronicle of Dalmau's show emphasizing the visual sensation caused, allowing spectators to have their very first contact with stereoscopic images in which "by a truly wonderful effect, by an irresistible illusion and a complete belief of sensation, the drawing acquires depth and the painting becomes a sculpture" (20-IX-1853: p. 1300). The report mentions "a double picture, a drawing, a miniature or a geometric figure, which were all doubled as well" without, however, dwelling too much on the dioramic effects (*Idem.*). These coincide with the initial moments of the diffusion of the device, when Duboscq accompanied his first stereoscopes with a collection of geometric figures consisting of white lines on a black cardboard (Fernández Rivero, 2004: p. 46). After remembering Wheatstone's investigations and the great diffusion of the device in England and France, the

chronicle points to a final fact: "We know that Mr. Dalmau will soon build them in his establishment in order to meet the increased demands" (Figure 3).

The story had broad coverage. In Madrid, it was reproduced in *La España* (24-IX-1853), *La Nación* (29-IX-1853) and *El Herald* (27-IX-1853). Furthermore, in Barcelona, it was reprinted in *El Presente* (21-IX-1853) before finally arriving on the Balearic Islands at the beginning of October in *El Balear* (5-X-1853). Thanks to the press, spectators in the main cities were no longer strangers to the visual novelty that was taking place in the Catalan capital, when Dalmau installed the *Animated Binocular Polystereoscope* as a permanent stereoscopic show in the optical cabinet. Before examining the exhibited views, we shall briefly address the nature of the adjective "animated" in this context.

### An Animated Stereoscope?

In the early 1850s, research pioneered by Wheatstone, Claudet and Dubosq tried to animate stereoscopic images by different means (Pellerin, 2017: pp. 26-38; Chik, 2014: pp. 142-148; Timby, 2000: pp. 124-143; Mannoni, 1994: pp. 229-230). While Dubosq imagined a device drawing from the open structure of the phenakistiscope, Claudet proposed a series of "figures mouvantes", realizing simple movements to be visualized through the parlor stereoscope (Chik, 2014: p. 138). Improving Claudet's device with a shutter in order to facilitate the visual experience, Furne and Tournier significantly chose the name "animated stereoscope" to patent it in 1860 (*Idem.*: p. 145; Pellerin, 2017: p. 33). In addition, Philippe Benoist (1856), Victor Siès (1859) and André David (1873) chose the same name when

they registered their respective devices while trying to couple three-dimensional depth and movement (Chik, 2014: p. 140).

On the contrary, despite its name, none of the views in Dalmau's show seemed to integrate or to research the sensation of movement. The choice of the word "animated" here does not point in that direction. At that time, describing a photograph as "animated" could also refer to the liveliness of its subject matter (that is, human activities such as dinners, weddings, baptisms and balls), to the presence of color or to dioramic effects or three-dimensional depth in the image (*Idem.*: p. 135). It was only due to these last technical qualities –as the advert clearly states– that Dalmau's stereoscope could be called "animated" despite its distance from kinetic experiences.

Moreover, the dioramic effects of the views motivated Dalmau to give the device a more complex name; *poly*-stereoscope. When Dalmau first displayed the dissolving views of the magic lantern, he used the term "polyorama", which he used later to designate optical boxes allowing for translucent optical views – probably due to the popularization of the French polyorama panoptique in the 1850s. As a result, when any of his shows included the presence of dioramic effects, Dalmau used the prefix "polyo-" to name them, such as the *diorama polióptico* mentioned above.

Having said that, one has to be careful not to confound polyorama shows with stereoscopic ones, especially when the names that were used to advertise them used to be misleading. Rivero (2004: p. 112) mentions a polyorama announced in Andalusia in 1853 as a possible stereoscopic show. It is described as a "duplicated optics" or a "double view" polyorama

[*óptica duplicada, o bien sea de doble vista*]. However, the text of the advert<sup>4</sup> points that by “double view”, it is referring to the day and night effects displayed by the views –such as the one showed by Dalmau in the 1850s mentioned above–, and not to a depth effect achieved through the means of two images.

As for my experience researching optical and stereo shows in Spain, I have not encountered any stereoscopic show going under the sole name of polyorama. When a show featured stereoscopic views, it always included the term “stereo” inside of its name. A clear example is the “Great Polyorama and Polystereorama” announced in Madrid in 1856, also quoted by Rivero (2004: p. 113). In this case, the press clearly describes the Polyorama as a device featuring 16 views transforming from day to night, while it stresses that the *Polystereorama* featured 12 views representing landscapes and groups from which one clearly appreciates its depth and its volume as in real life.

### The Stereo Show in the Media Context of the Optical Cabinet

The press regularly reported on the renewal of the stereo show with “new views, allegories and other precious objects”,

always highlighting the “light and three-dimensional effects” of the prints (*El Áncora*, 23-III-1854: p. 1263). In 1855, it was still the only stereoscopic photography show in the city, featuring famous “squares, buildings and academic groups” (*Diario de Barcelona*, 23-IX-1855: p. 7567). The program did not include other details or precise titles but everything pointed to a constant enrichment of the optician’s catalog, which went hand in hand with the expansion of the stereoscopic views market in Europe (Pellerin, 1995: p. 15). By 1858, he had included 12 photographs on glass featuring the Bosphorus, a great panorama of Constantinople, Egyptian monuments, the Alcazar of Seville and the salons of the imperial palaces of Paris and Versailles, etc.<sup>5</sup>. The program also mentions fictional scenes such as fantasy groups or a duel, claiming that “some of the exhibited stereoscopic views are some of the best that have been seen in Barcelona” (*Diario de Barcelona*, 16-XII-1858: p. 11393).

It comes as no surprise that most of the stereo-views in Dalmau’s show mainly presented vistas and monuments. The vocabulary that emerged around the device emphasized the ability of the images to take the viewer on a virtual journey. However, armchair travelers or *icononautas* (Brunetta, 1994)

had already visited Europe and even distant regions through the means of optical views (Zotti Minici, 1984; Milano, 1990; Huhtamo, 2006). Since the 18th century, optical views had shaped Europe’s image and imaginary, arriving in every big and little city thanks to the spread of optical shows such as the *mundonuovo* or the later bourgeois version of it, the *cosmorama*<sup>6</sup>. While produced in Paris, Augsburg, London or Bassano, optical views and optical boxes are thought to have become a common object in Madrid by 1750 (Vega, 2010: p. 440).

When the stereoscope reached Barcelona, peepshows, *cosmoramas* and optical boxes were far from being an “obsolete curiosity” or a show “of the past” (Huhtamo, 2006). Dalmau himself had run his *cosmorama* for a decade before presenting the new device and he continued doing so even after. Thus, his case illustrates the evolution of the acceptance and popularity of the stereo show in relation – or rather, in *remediation* (Bolter & Grusin, 2000) – to other previous and future forms of entertainment.

Since the opening of Dalmau’s first *cosmorama* in 1843, the daily visual menu of the Catalan *icononauta* was composed of a varied set of European views and monuments, among which the press constantly highlighted a series of optical views of Barcelona painted by the local artist Onofre Alsamora (Cuenca,

2018), the illumination of the Vatican and two dioramic views of the Crystal Palace’s Great Exhibition. Regarding the latter ones, Dalmau did not hesitate to use the *topos* of the virtual tour to promote his shows:

“Those who did not have the chance to see the wonder of the century, those who renounced the magnificent spectacle offered by the Crystal Palace, for not having to suffer the discomforts of a long trip, can today without leaving this capital, enjoy the amazing view offered by that temple of the arts and the industry” (*El Sol*, 1-XI-1850: p. 1240).

When the stereoscope was first introduced in 1853, it became the main attraction of the cabinet. It took center-stage during the first few months to then go on to share the program with the previous *diorama polióptico*, presenting views of the country and abroad. The difference between the two shows became clear: while the new show was on offer for two *reales de vellón*, the older spectacle only cost one *real de vellón* (*El Áncora*, 20-XI-1853: p. 784). Later on, Dalmau introduced a “panorama” – probably another kind optical box–, following the main events of the Crimean War with views of Sevastopol, Kronstadt and the Gulf of Finland, among others<sup>7</sup>. The following is an example of a typical program of the period, as published by the *Diario de Barcelona* on the 8<sup>th</sup> December 1854,

4) “The polyorama announced contains eight lenses and the same number of views, but by means of an ingenious mechanism, the views will feature day and night effects, appearing and disappearing several objects and personages [...] so that to the spectator will be presented sixteen magnificent and varied points of view” (*Avisador Malagueño*, 17-II-1854, reproduced by Rivero, 2004: p. 112). Moreover, the image that accompanies this advert shows a kind of multi-monocular device. Dalmau also used “double effect” and “double view” to announce his polyoramas and optical boxes allowing dioramic effects during his career (*cf. El Sol*, 1-XI-1850, p. 1240; 1877, p. 64).

5) We have not been able to relate specific stereoviews to Dalmau’s shows. The lack of studies and of surviving stereoviews of these very first years in local photo archives complicates any research of this period. Moreover, the titles of the views presented after c.1856 are too general and could correspond to many of the views of the main European editors (Gaudin Frères, Ferrier and Soulier, London Stereoscopic Company, etc.). We have tried to compound instead an overview of the visual (stereo)landscape that the spectators could have witnessed in Dalmau’s stereoshow.

6) By *mundonuovo* (also known as *tutilimundi* or *mundinuovi* in Spain), we refer to a transportable optical box of big dimensions that was showed mainly in the open air. The *cosmoramas* appeared by the beginning of the 19<sup>th</sup> century in Paris and differed from these by being showed in interiors, mostly for a bourgeois audience. It consisted of a room covered by a second wall containing the lenses through which the spectators would enjoy the views. The Museum of the Cinema in Girona conserves a rare model of a portable *cosmorama* (Reg. 03425). For more information on optical views, see Zotti Minnici (1984), Balzer (1981) or Levie (1995) and for its presence in Spain, Vega (2010).

7) Despite its name, the descriptions point to an optical box or *cosmorama* device. For this show *cf. Diario de Barcelona*, 8-XII-1854, p. 8719; *El Áncora*, 18-II-1855, p. 788; *Diario de Barcelona*, 29-VI-1855, p. 5230; *El Ancora*, 30-VII-1855, p. 480; *El Áncora*, 23-IX-1855, p. 1356.

while also informing the public that at that moment, there were two *polystereoscopes* on display:

"From today, the great panorama of Sevastopol will be revealed with views taken from opposite directions, as well as the double effect polyorama with new and selected views from abroad, and two magnificent *polystereoscopic* apparatuses, with varied and surprising light and three-dimensional effects (...) This evening, from 6 to 9 pm"<sup>8</sup>.

This structure remained unaltered until Dalmau's business underwent a fundamental turn when he partnered up with the physicist Rosselló. From then on, the optician's store also offered all sorts of physical and mechanical instruments, such as steam engines, thermometers, barometers, electric telegraphs, fire extinguishers etc. The cabinet was renamed "The Optical and Physical Mechanic Cabinet of Mr. Dalmau and Mr. Rosselló" (Figure 4). Magnetic electricity, recreational physics and telegraphy were introduced as a novelty. Spectators could, for example, experience the effects of electricity in

the body using galvanic devices. They could also see electric motors in movement and electric telegraphs in operation, receiving messages from San Petersburg, Paris and London in December 1855 (*El Ancora*, 23-IX-1855, p. 1356). During this period, the Cabinet hosted a panorama of the Crimean War and several stereoscopes mainly featuring views and monuments, while the Physics' recreations closed down the show<sup>9</sup>.

It is interesting to note that when the stereoscopy-travel binomial merged, the peep-shows in Dalmau's cabinet progressively abandoned the topographic theme to concentrate on the great wars of the period, thus becoming a sort of illustrated news. In 1859, the panorama of the Crimean War was followed by a panorama of the Hispano-Moroccan War with a clear tendency of reinforcing the national feeling. This was

also true for other optical shows in Barcelona, like the one run by the optician Luis Corrons, which moved next to the Liceo Theater in 1854, just in front of Dalmau's boutique (Figure 5). Corrons opened his optical cabinet in 1852, which was first located next to the Principal Theater. In 1856, he featured a panorama of the Crimean War (*El Ancora*, 23-IX-1855, p. 1356) and he also presented 12 views of the African campaign in the Industrial Exhibition that caught the public's eye in 1860 (Sánchez, 2006: p. 172). Regarding the stereo shows, Corrons had also been exhibiting a stereoscope since at least 1856. Trying to attract a larger audience, his shows were always less expensive than Dalmau's, varying from 6 *cuartos* to 1 *real*. The competition between both is easily traceable in the pages of the press, where they normally advertised their shows side by side (Figure 6).

I haven't stressed the significance of Dalmau's shop location in La Rambla, just in front of the opera theater Liceo, enough. Opened in 1848, it immediately became a symbol of the new modern and bourgeois life. A lot of coffee shops, photography studios and luxury shops opened in the area, and it became the center of entertainment and leisure life, among which Dalmau's optical shows were undoubtedly a popular attraction. This gives us a clue of the impact of Dalmau's shows, which

gained great visibility among his potential consumers and spectators, as well as among all the *flâneurs* of the lively avenue. When Corrons established himself in front of Dalmau's shop, the area formed by the triangle between the opticians' shops and the Liceo Theater became a sort of optical amusement park in the city, and a meeting point for staying up to date with the last trends in visual novelties.

Coming back to Dalmau's cabinet, when his partnership with Rosselló came to an end in 1859, the optician did not renounce continuing to exhibit the mechanical and electric instruments as part of his Cabinet shows, which over time had accumulated the adjectives of "optical-physical-mechanical-electro-magnetic-photographic" (*Diario de Barcelona*, 26-XII-1858: p. 11816). Neither did he abandon his business, becoming the core of his enterprise in the following years (Sánchez, 2006: p. 175). Barcelona itself was expanding beyond its medieval walls, building avenues, residences, entertainment places and new lightening systems and ways of transport were being established as part of new modern life. Recreational physics matched this new spirit much better, as the stereo images were completely assimilated by Spanish spectators. Accordingly, when Dalmau reopened the cabinet in 1859, viewing the panorama and the stereoscopes cost one *real*, whereas entering the panorama and the physical cabinet cost two *reales*.

### 1860s: The Stereoscope's Success in Spain

Six years had passed since the arrival of the stereoscope show in Barcelona. The price reduction clearly points to its

8) *Diario de Barcelona*, 8-XII-1854, p. 8719.

9) See for instance: *El Ancora*, 30-VII-1855: p. 480: "It will be exposed: 1<sup>st</sup> the Great panorama of the war of the East with the general view of Sevastopol and Kronstadt. 2<sup>nd</sup> The animated binocular *polistereoscope* with magnificent views in perspective and figure imitating the relief. 3<sup>rd</sup> Exercises of magnetic electricity, the electric telegraph, the electric suspension, the electric chain, with other curious and surprising objects belonging to Physics. Every day from 8 to 10 pm. at night. Tickets at 2 *reales*". Later on, it reappeared a peep-show with six Spanish and foreign views (*Diario de Barcelona*, 16-XII-1858: p. 11393).

increasing availability (in toy stores<sup>10</sup>, optical shows, photography studios etc.) and to its great popularity among the general public. By 1857, stereoscopic portraits were being offered in most Spanish photography studios (Rivero, 2004: pp. 117-120) and by the beginning of the 1860s, the press was already speaking of the stereoscope as a well-known object. The newspaper *El Museo Universal* even stated that “it seems perhaps useless that we discuss a device so widespread that must be known to all of our readers. Indeed, there was no accommodated home and no social gathering where the stereoscope was not part of the family distractions during the winter nights” (25-XI-1860: pp. 381-384 quoted by *Idem.*, p. 110). Moreover, the users had started to experiment and to play with the instrument, finding alternative ways of enjoying the binocular device:

“If instead of the two drawings of the same object, we place [in the stereoscope] two different figures, such as a circle and a square, the two figures will be seen as superimposed, and it will also be observed that in some moments one of them disappears. If each of the two figures represented half of the same drawing, the drawing would look as if it was completed. If two identical figures are placed, but of a different color, it will appear only one with the color that would produce the mixture of the two inks”<sup>11</sup>.

That same year, a Spanish magazine published a little comic story entitled “A happy couple” where the stereoscope was used as a metaphor to disclose the final joke in the tale, illustrating one of the “alternative” uses<sup>12</sup>. Two very atypical lovers who wanted to immortalize their love were photographed both together and separately in the studio of a photographer. Not satisfied yet, “they wanted to see their bodies as confused as were their souls, and to do so, they recurred to the stereoscope”. They then placed the portrait of M. Mónica on one of the sides and Mr. Serapio’s on the other, converging on a point its duplicated image. As outlandish as the result seemed, the couple was happy to finally achieve a perfect fusion (Figure 7). Within less than a decade, the stereoscope had already been perfectly integrated into Spanish society, becoming a common metaphor to explain, understand and twist reality – as other image technologies had done before, from the peep-show to the magic lantern (Riego, 2001; Fernández, 2006).

In relation to the stereoscopic photographic practice, I would like to end this paper by briefly presenting the new data regarding a stereo photography studio that Dalmau opened in

Barcelona as early as 1854 and its relationship to other photographic experiences.

### The “Optical Photography Studio” and other photographic trends

“In order to disseminate this new discovery in our country, Mr. Dalmau has opened a photography and stereoscopy workshop for all those who wish to obtain their portrait or any other objects by means of this new method”<sup>13</sup>

The opening of the studio took place in March 1854. It was located in Canuda street nº 13 (*Diario de Barcelona*, 19-IV-1854, p. 2781), not far from Dalmau’s main store. The appearance of binocular photographic devices, which facilitated the taking of a stereo pair of images, certainly motivated Dalmau to venture into this new enterprise. The advert concretely makes reference to the Quinetoscope, named after its inventor Alexandre Marie Quinet. It shows an illustration of the facade of Dalmau’s store in La Rambla, headlined by the words “Optical Photography Studio” and accompanied by the text “portraits and views for stereoscopes” and “stereoscopes of all shapes” on each side (Figure 8).

Our research in the local archives (Arxiu Municipal Administratiu, Arxiu Fotogràfic de Barcelona, Arxiu Històric de la Ciutat de Barcelona, Reial Acadèmia de Ciències i Arts, Museu del Cinema de Girona), private collections and the local press has not revealed additional information for now, and we have

not encountered photographic prints that may have been produced in Dalmau’s studio. Despite the lack of data and many questions remaining open –Who run the studio? Are there surviving stereoviews? Was it always located in Canuda street?–, it seems clear enough that Dalmau’s studio became one of the first to offer stereoscopic photography in the city, together with the aforementioned workshops.

10) See for instance the *Diario de Barcelona*, 12-V-1859, p. 5108 which announces the arrival of a new set of stereoscopes and stereo-views in a toy store located in the Pasaje de las Columnas.

11) *El Museo Universal*, 25-XI-1860: pp. 381-384.

12) Cf. *El Moro Muza*, 3-VI-1860: p. 4.

13) *Diario de Barcelona*, 19-III-1854, p. 2011. This first announcement is reproduced in Sánchez (2006, p.195) and also quoted by Fernández Rius (2011, p. 149). The illustration that we are offering dates from the following month, when Dalmau included the address in the bottom.



In 1863, Dalmau announced the sale of a photographic cabinet “in one of the most popular avenues of the city”, claiming that “his owner was leaving the profession”<sup>14</sup>. That same year, the optical shows seemed to have come to an end in his shop. However, Dalmau remained at the head of his enterprise and he continued experimenting with photography. Imitating the Nadar experiences in Paris, he tried to obtain portraits using electric light as the only light source. To do so, he collaborated with the photographer Leopoldo Rovira Deloupy in 1864<sup>15</sup>. Taking the date into consideration, it would not be strange if Rovira had previously collaborated with the stereoscopic studio. Convincing results were only achieved when Dalmau, together with his son Tomàs, repeated the experiment in 1881 with the renowned photographer Pau Audouard, located also near to their store, in the Rambla del Centro n. 17 (Fernández Rius, 2011, p. 134, 146-150)<sup>16</sup>.

Meanwhile, Dalmau opted to devote himself to a new and expanding market: the sale of photographic material for both professional and amateurs. Together with his main competitor, Luis Corrons, the optician was one of the first to have sold photographic material for this new sector of the public in the 1860s, helping the practice to further expand in the city (Fernández Rius, 2011: p. 235). In the 1877’s catalogue of the “Dalmau and son” store, one could find regular cameras, lenses and accessories in addition to a great variety of binocular cameras and lenses for stereoscopic photography (p. 66, c. 1546-1549). “Dalmau and son” also sold Brewster,

Wheatstone and Holmes’s stereoscope viewers together with views of all countries (p. 67, c. 1566-1574).

Francisco Dalmau passed away in 1886, but the firm he created continued selling stereoscopes and photographic material for many years to come (Figure 9).

14) La Corona, 12-X-1863, p. 4; *Diario de Barcelona*, 10-X-1863, p. 9196.

15) Cf. *La Corona*, 28-IV-1864, p. 7. A later chronicle remembers the experiences: *El Porvenir de la Industria*, II, 1876, pp. 80-81.

16) For the original report: *El Porvenir de la Industria*, VII, 1881, 305, pp. 19-20. For Pau Audouard career and work cf. Fernández Rius (2011).

## Final Remarks and Conclusions

Dalmau’s shows undoubtedly contributed to the diffusion of stereoscopic photography in Barcelona. From 1853 to 1855, it was the first and only stereo show presented in Barcelona, when stereoscopic photographic was still in its very early stages. Although his prices were not accessible to everyone, it remained cheaper to observe Dalmau’s stereoscopes for few minutes than to invest in a portrait or a set of views, thus expanding the potential viewers of the stereo images. Thanks to his campaigns in the press, the novelty was commented also in the rest of Spain. On the other hand, he also contributed to the development of stereoscopic practice, opening his own stereoscopic studio a year later. Finally, he became also a supplier of stereoscopes, stereoviews and stereoscopic and photographic material for spectators, professionals and amateurs alike.

Whenever stereoscopic —and, generally, optical— shows have been discussed, they have usually been associated with itinerant fair stands and popular or cheap forms of entertainment. While this remains true, Dalmau’s case shows that there was also an offer of permanent shows targeted at a bourgeois audience. In the case of stereoscopy, the first visual shows related to stereoscopic photography were indeed only affordable for the accommodated classes. In this sense, the chronology of Dalmau’s shows clearly reflects the penetration of stereoscopy in Barcelona’s society of the 1850s. While it remained a visual novelty until 1855, toward the end of the decade, the stereoscope was a well-known and common instrument which was easily found in photographic studios, optical houses, toy stores, bourgeois interiors and even in language metaphors and jokes. It wasn’t until the price started to decrease by the

1860s that itinerant stereo shows started to spread around the Peninsula in great numbers. Moreover, Dalmau’s case also shows that stereoscopy did not replace cosmorama or polyorama shows in the Optical Cabinet, but that they coexisted and influenced one another. While stereo shows immediately introduced popular dioramic effects, cosmoramas continued attracting people’s attention by starting to focus on contemporary subjects.

Finally, Dalmau’s store is often quoted in Barcelona’s local photo-histories as a key supplier of photographic material that contributed to the development of amateur practices and the expansion of professional photographic studios in the 1860s. While this was an important move in his career, I hope to have shown that Dalmau’s relationship with photography began with stereoscopy a decade before. It was only after having established the stereoscopic show that Dalmau first became interested in opening a photographic cabinet and later selling photographic material. Before this moment, there is no evidence that Dalmau was interested in photographic procedures. There are still many questions to be resolved, notably concerning his photographic studio and the suppliers of his first stereoshows. I hope that this research has achieved providing an insight into Dalmau’s relationship with stereo photography and to highlight the role that optical shows played in the diffusion of stereoscopy in Spain.

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