

CINEMA IN THE (STEREOSCOPIC) PHOTOGRAPHY OF PAZ DOS REIS - AESTHETICS AND VISUAL EXPERIENCES¹

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Abstract

The history of Portuguese cinema, marked by non-linear developments, had a promising start with Aurélio da Paz dos Reis, a pioneer who initially explored new cinematographic technologies before abandoning them in favor of photography. Paz dos Reis, known for introducing cinema to Portugal in 1896 with *Saída do Pessoal Operário da Fábrica Confiança* [*Exit of workers from the Confiança factory*], turned to stereoscopic photography, leaving behind a vast collection of 7294 glass plates that reveal his innovation and originality. This study examines his contribution to stereoscopy and the cultural impact of his documentary and photographic practices, placing his work in the context of the archaeology of media and visual technologies in the 19th and early 20th centuries. The research emphasizes the impact of Paz dos Reis' stereoscopic practices on the development of visual culture in Portugal and his documentation of significant historical and social events. This offers a more profound understanding of the relationship between cinema and photography.

For this project, the artistic research [13]method [14]will be employed to experiment with Aurélio's original film footage and a documentary that is based on some of his most renowned photographs.

Keywords

Stereoscopy, Aurélio da Paz dos Reis, Media Archeology, New Media

1. Introduction

The early history of Portuguese cinema is a prime example of when media evolve in non-linear ways. Aurélio da Paz dos Reis, the pioneer of Portuguese cinema, initially investigated and subsequently abandoned the new and promising cinematographic technologies. Instead, he intensively explored photography as a means of documenting current events [1].

Until the public dissemination of his photographic work, the relevance of Paz dos Reis' legacy was mainly associated with his role in introducing cinema to Portugal [2]. The titles of his films were known through publications and books, and the Portuguese Cinematheque preserved his first film, along with excerpts of other productions, as well as a camera discovered in 1978 by film club member Henrique Alves Costa [4]. Biographical details about his political activity as a committed republican were also known, along with his diverse commercial ventures, including the sale of photographic equipment and his activity as a photographer. Nevertheless, his stereoscopic practices presently enable us to reevaluate the originality and innovation he introduced to his era and to develop novel hypotheses, such as the possibility that he was the first person to develop a stereoscopic newspaper worldwide [3].

In 1896, Aurélio da Paz dos Reis (1862–1931) utilized a camera and projector that he had bought in France to create the first Portuguese film, *Saída do Pessoal Operário da Fábrica Confiança* (*Exit of Workers from the Confiança Factory*). In doing so, he introduced to Portugal what was then called the “latest marvel” of the 19th century – cinema.

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“In the summer of 1896, [Paz dos Reis] considered buying a cinematograph from the Lumière brothers and traveled to Paris, but they refused to sell it to him. He ended up purchasing, together with his brother-in-law Francisco Magalhães Bastos Júnior (a merchant and founder of Photo Universal), a chronophotographic device from the Werner brothers — a variant of the cinematograph, with a different mechanical operation, but serving the same purpose: to film. With this equipment, Aurélio da Paz dos Reis filmed his friend António da Silva Cunha’s factory, the Camisaria Confiança, located at 181 Rua de Santa Catarina. This film is the first known work of Portuguese cinema.” [5]

Some controversy has arisen regarding Paz dos Reis's entry into the film industry. It is stated in the *Manual do Cidadão Aurélio da Paz dos Reis*, the catalogue for the inaugural exhibition of the Portuguese Centre of Photography, which was held at the former Cadeia da Relação do Porto, that Paz dos Reis discovered that Pinto Moreira had already conducted animated scene sessions using a Portuguese animatograph upon his return from Paris, even though the program did not contain any Portuguese content. Doubts persist regarding the film *Arrival of the Tugboat "Liberal" at the Port of Leixões* and *Disembarkation of the Pilgrims Travelling by Sea to the Senhor de Matosinhos Pilgrimage*, which is alleged to have been shot in May 1896 [2].

Aurélio da Paz dos Reis was well-integrated into the dynamic society of his era, had traveled to Paris on numerous occasions, and possessed a curious spirit. He was convinced that animated photography would be a novel concept with significant potential because of his fascination with inventions [4].

Other movies came after, but a large amount of his filmography no longer exists. This is partially due to a lack of faith in the permanence of cinema and partly due to a lack of preservation efforts. There are reports that his children played with the film reels, cutting or burning them to enjoy the beautiful colored flames [6] they produced.³

2. The Dissemination of Paz dos Reis’ Stereoscopic Archive

Despite his pioneering role in cinema, Paz dos Reis left behind a substantial and significant photographic archive, primarily composed of stereoscopic images — one of the largest collections held in Portuguese public archives, totaling 7,294 glass plates measuring 7 × 18 cm. Most of these images have already been digitized and made accessible to the public [1].

Since their release, several conferences and exhibitions have been organized, and books have been published focusing on Paz dos Reis’ productive stereoscopic work. These resources also offer insights into the shift from cinema to photography, as noted by historian Maria do Carmo Séren in *Manual do Cidadão*:

“With the dissemination of Paz dos Reis’ important stereoscopic collection, new possibilities for discoveries or hypotheses regarding his work are being opened, and a more profound understanding of the reasons behind his shift from cinema to photography becomes possible.” [5]

Nonetheless, there are a few indicators that assist us in comprehending this shift in course. Paz dos Reis dedicated himself to photography, which at the time was a more profitable art form than cinema. An intense wave of stereoscopic production by amateur photographers in Portugal was the result of the resurgence of interest in stereoscopy in early 20th-century Europe, which was a more mature practice.

This phenomenon is a component of a broader trend of democratizing image-capturing and reproduction technologies, which has gradually become accessible to individuals outside the professional community. Throughout Portugal, this type of production was particularly evident in

³ According to Félix Ribeiro, Paz dos Reis composed approximately thirty films; however, only four reels have been preserved.

amateur settings, frequently associated with family documentation, leisure activities, and collecting practices. The dynamic market for stereoscopic materials was particularly significant for Aurélio da Paz dos Reis, who sold them in his flower shop in downtown Porto and continued to use them in his photographic work until his death in 1931 [7].

Similar to numerous of his contemporaries, including Edison and the Lumière brothers, Paz dos Reis likely did not anticipate the long-term profitability of animated image projection [4].

A further indication is that cinema in Portugal may have been motivated more by a moral obligation than by aesthetic ambition, with a strong emphasis on the documentation of historical events and cultural traditions. The essence of Portuguese society at the time was captured in various media, including traditional festivals, customs, and practices; documentaries on urban life; religious ceremonies and community festivities; and recordings of daily routines, including the departure of factory workers at the end of the day, local markets, and family life. Paz dos Reis filmed these elements of Portugal with the intent of showing them abroad, particularly in Brazil, to recoup his investment in filmmaking equipment. However, the business venture in Brazil ultimately failed, and the money he invested in the “Portuguese Kinetograph” [10] and his early films was never recovered⁴.

Paz dos Reis' photographic activity reveals a wide range of subjects, including family portraits, portraits of notable figures, and scenes of everyday life. One fruitful way to study his stereoscopic work is to consider its documentary nature, which is evident in the various events he captured:

“[...]‘current events’ such as the parade celebrating the centenary of India in Lisbon in 1898; doctors Ricardo Jorge, Câmara Pestana, and Bento Silva in Porto during the bubonic plague outbreak; a crowd during the Siege of Porto; the fire that destroyed the Real Teatro de São João in Praça da Batalha in 1908; a group of scientists from around the world visiting Portugal for the total solar eclipse in April 1912; photographs of the wreck of the steamship Veronice north of Leixões in January 1913; and flower and art exhibitions held at the Palácio de Cristal – he even captured an advertisement for two Spaniards climbing the Clérigos Tower.” [9]

Aurélio da Paz dos Reis played a key role in documenting life in Portugal during a period of intense political and social transformation. As a liberal republican, he was directly involved in political struggles before the proclamation of the Republic in 1910. His engagement extended beyond politics and into the photographic documentation of these events.

Tereza Siza claims that the primary objective of the 1996 exhibition commemorating the centenary of Portuguese cinema was to promote the photographic archive and personal objects of Aurélio da Paz dos Reis, which were preserved by his grandson, Engineer Hugo da Paz dos Reis, in addition to commemorating the date of the first Portuguese film. The original materials presented hold essential psychological value for the history of photography, reflecting the author's sensitivity as well as the photographic and cinematographic techniques of the period [11]. Paz dos Reis oscillated between the fixity of photographic images and the movement of cinema, rejecting grandiosity in favor of a more intimate vision of urban daily life.⁵

In addition to documenting significant political moments, Paz dos Reis' photographic legacy is not limited to stereoscopy – it also includes other images that today are of great historical and social

⁴ The presence of images almost abruptly ceased, as stated by M. Félix Ribeiro. Following his departure from Brazil, Cármen Séren is aware of a “photographic plan for a film, O Morgado.” And nothing more” (in AA.VV. Aurélio da Paz dos Reis, 1996: 17-18).

⁵ Tereza Siza regarded the collection as remarkable due to the significant number of glass plates, thousands of paper prints, and an extensive collection of photographs that encompassed themes such as groups, personalities, theater artists, excursions, events, landscapes, and private life. During his time in Brazil, he captured excellent photographs of cities such as Rio de Janeiro, São Paulo, Bahia, Santos, and Petrópolis.

relevance. A notable example is his photographic record of the bubonic plague in Porto⁶, a collection held uniquely by the Portuguese Centre of Photography (CPF)[12].



Figure 1: 1899 In Porto, measures were taken to clean up the area by setting houses on fire. Photograph by Aurélio da Paz dos Reis. (PORTUGUESE CENTRE OF PHOTOGRAPHY.).

⁶ Photographs and the renowned Porto photographers who helped to document the bubonic plague in 1899. In t In this context, a photograph of the events naturally emerged, which would later result in what is called photojournalism. The relationship between photography and journalism is unequivocally demonstrated by Aurélio and Guedes de Oliveira. In parallel, a social photography developed, taking on the mission of denouncing about the poorest and the unprotected. These new areas would broaden the horizons of what would be called documentary photography. It is the first major epidemic to have a substantial photographic record. There are many photos by the extraordinary Porto photographer Aurélio da Paz dos Reis, and some bearing the stamp of Photographia Guedes, a well-known photography studio in the city at that time. The images show the actions taken to combat the epidemic by the sanitary brigades and firefighters, the backup work in the laboratory carried out by medical staff under the direction of Ricardo Jorge, and document various protest actions carried out by the population and the active forces of the city.



Figure 2: 1899 Meeting of merchants and businessmen from Porto, at the Palácio da Bolsa, to discuss the economic disruption in the city caused by the sanitary cordon. Photograph by Aurélio da Paz dos Reis. (PORTUGUESE CENTRE OF PHOTOGRAPHY.).

3. Paz dos Reis and The Press

Over time, Paz dos Reis made a significant shift from cinema to photography — a transition that allowed him to further develop his ability to document reality through imagery.

This change not only marked a new phase in his career but also introduced innovations that anticipated the evolution of photojournalism, particularly through his prolific activity in the press.

Although Paz dos Reis presented himself as an amateur photographer⁷, he held journalistic credentials and was able to publish his photographic records in newspapers of the time, such as *Folha Nova* and *Pontos e Vírgulas*. He also contributed to the weekly *Ilustração Portuguesa*, published from 1903 by the newspaper *O Século*. Some of these images were stereoscopic and were later sold in a commercial series of stereoscopic cards under the name *Estereoscópio Portuguez* [1]. This collection depicted political events such as the turbulent republican rallies, bourgeois social life, and scenes from everyday life in the streets of Porto⁸.

The stereoscopic practices of Paz dos Reis now allow us to recognize the originality and innovation he brought to his time and even support the hypothesis that he may have been the first to create a stereoscopic newspaper [1]. Another factor that may have contributed to his prolific

⁷ In the sense of the word “amateur,” in the French meaning of a lover of art, prioritizing the artistic side, especially since Paz dos Reis commercialized his stereoscopic collections, thus making him a professional.

⁸ The times of republican struggle also explain why a republican, who would become famous for his dedication to the Republic (imprisoned during the Revolution of January 31st and in 1905) and for introducing cinema to Portugal, Aurélio da Paz dos Reis, without a photographic studio but with various commissions for republican activities, group outings, and bullfights, is considered one of the great photographers of Porto. Like another photographer of his time, Guedes de Oliveira, both saw photography as a means of popular culture, thus also fulfilling the republican ideology (Séren 2016).

photographic activity was the advancement in photographic technology — particularly the silver gelatin emulsion, which enabled faster exposure times.

In the context of the activity of amateur photographers at the end of the 19th century and the beginning of the 20th century, contemporaries of Aurélio da Paz dos Reis, the Vérscope—a French stereoscopic camera designed by Jules Richard in 1893—played a revolutionary role in travel and leisure photography. With its small format (4.5 × 10.7 cm) and optical precision, the Vérscope resisted humidity and extreme temperatures while being highly portable. This allowed for precise stereoscopic viewing and facilitated the work of amateur photographers, who valued the ability to capture high-quality three-dimensional images without the need for enlargements or re-framing.

Amateur photographers contemporary to Aurélio da Paz dos Reis, who were already exploring innovative techniques such as stereoscopic photography to document the social, cultural, and political life of Portugal, found in the Verascope an ideal tool for their activities. The camera was widely appreciated by Portuguese scientific figures such as Gago Coutinho during his African missions and Afonso Chaves in his geodetic studies in the Azores. Additionally, military figures like César Moura Brás and other amateur photographers, such as Arthur Freire and Arthur Benarus, also made extensive use of the Vérscope [15].

Jorge Marçal da Silva [7], a contemporary of Paz dos Reis, stood out by including his signature on his photographs, following the artistic and authorial tradition of 19th-century amateur photographers. Thus, the Vérscope not only facilitated the technical work of these photographers but also allowed them to continue developing and innovating in the art of stereoscopic photography, contributing to the rich visual heritage of the time [15].

Paz dos Reis distinguished himself by using a Mackenstien camera, also a travel camera, but one that used larger negatives and offered higher quality.

As for the study of Aurélio da Paz dos Reis' stereoscopic portraits, it provides a more detailed and intimate view of his work as a photographer, contributing to the characterization of his lesser-known body of work. While his outdoor photographs are more widely recognized, the stereoscopic portraits reveal a less explored facet of his artistic production. The analysis of these portraits allows for a more profound understanding of the photographic techniques used by Paz dos Reis [16], as well as the influence of artistic society and the celebrities portrayed in his work. Thus, the study of stereoscopic portraits enriches the appreciation of Paz dos Reis' lesser-known works and broadens the understanding of his contribution to the history of photography⁹.

4. Historical Context of Stereoscopy—Visual Effects

According to Thomas Elsaesser [17], for nearly a hundred years, the moving image was primarily discussed from the perspective of photography, organizing questions and theories around cinema as an ocular device—based on light, projection, and transparency—or as a recording device—based on index, imprint, and trace. In the era of digital imaging technologies, some of which have little to do with optics, such a history of the moving image seems overly limited.

The broadly based, though loosely defined, field of inquiry known as “media archaeology” not only places cinema within the broader histories of media but also investigates past media practices that appear obsolete, neglected, or misunderstood. The expectation is that by “reopening” these pasts, a different future might also be envisioned or enabled.

In the 19th century, visual culture was marked by a desire for simulation, with panoramas, dioramas, and phantasmagorias. Photography, with the daguerreotype, introduced an extremely

⁹ He was considered a photographer of great value, though his role as the introducer of cinema to Portugal was less appreciated, with series on established themes like *The Exit of the Workers from the Camisaria Confiança* and original films (many of which were lost), from which he eventually gave up due to financial problems after their screening in Brazil. He left behind the most beautiful images of the Republican Revolution of 1910 and is known for the spontaneity and movement in his images [26].

sharp image, almost resembling natural vision, which was expanded by stereoscopy, adding a sense of depth and solidity.

The history of media archaeology shows that the widespread attempts to capture the image of life itself—through the development of various stereoscopic cinematic devices such as the Stereoscope, the Fantascope, the Diorama, the Mutoscope, the Bioscope, and the Cosmorama, among many others—gave rise to a utopian vision of a new world of visual reality [18], which inspired the many efforts of inventors over time.

Beyond the use of popular narratives, the visual effects enabled by stereoscopy anticipated various techniques that would later be widely developed in cinema, particularly the dissolve and time-lapse, used to represent the passage of time, such as the transition from day to night. This endeavor is to examine the significance of cinematographic concepts in the context of stereoscopy, examining the ways in which this visual technology facilitated the development of realism effects and the exploration of depth and color. Devices and formats that are associated with the expansion of stereoscopic images, such as the GIF and the anaglyph, will also be regarded as hybrid forms that operate between still and moving images, thereby challenging the conventional boundaries between photography and cinema.

Not only does the development of three-dimensional viewing devices demonstrate technological advancements, but it also underscores the enduring cultural aspiration for visual immersion. We can observe a continuity in the pursuit of immersive sensory experiences, from the stereoscope, whose technical simplicity enabled the creation of depth effects that captivated audiences at the time, to the most recent virtual reality technologies. In the 21st century, virtual reality has continued to evolve. Virtual reality is a modern version of this stereographic tradition that provides users with complete immersion in three-dimensional visual environments in the 21st century. These technologies are highly sophisticated derivatives of the 19th-century stereoscope, which reflect the ongoing historical desire for expanded forms of visual perception as well as advancements in optical and computational engineering [19].

Stereoscopy's technological and cultural continuity, which has led to the development of contemporary virtual reality, is a prime illustration of the technical evolution of visual mediation devices, as well as the historical layers of meaning and experience that they bear. Scholars like Jussi Parikka [20] prioritize this historical and material aspect of the media in their archaeological methodology. From an archaeological perspective, the Finnish theorist has investigated the relationship between media, culture, and technology, considering the intersection of communication media with material culture and the repercussions of technological history. Parikka underscores the significance of scrutinizing the physical and infrastructural components of media devices in addition to the symbolic or cultural aspects. His perspective is consistent with the Foucauldian concept that dispositifs (apparatuses) are essential to the production of knowledge, thereby allowing technologies to actively influence the formation of mediated experience and forms of communication.

It is crucial to consider the potential references that Aurélio da Paz dos Reis may have known, particularly the early stereoscopic works of Antoine Claudet (1797–1867), when analyzing the transition from cinematic practice to stereoscopy.

Claudet established a daguerreotype studio in London after acquiring one of the first licenses to practice the profession and master Daguerre's techniques. He subsequently achieved some of the earliest stereoscopic images for Charles Wheatstone's mirror stereoscope [21].

Claudet was a fervent supporter of stereoscopic photography, which he viewed as a far more perfect reflection of the real world—while also being more affordable¹⁰.

¹⁰ "The stereoscope is the general panorama of the world. It brings us, in the cheapest and most portable form, not only the image but also the model, in a tangible form, of everything that exists in the various countries of the globe; it presents us with scenes known only through the imperfect relations of travelers; it leads us before the ruins of ancient architecture, illustrating the historical records of ancient and lost civilizations, the genius, taste, and power of past eras, with which we become familiar as if we had visited them." [21].

Pellerin points out that cinema may have begun with Antoine Claudet's stereoscopic self-portrait while smoking (1852)[22], which created a sensation of movement through the act of bringing the cigarette to his mouth, possibly the oldest surviving evidence of experiments that combined the effects of motion [23].

Another possible reference for Paz dos Reis may also have been access to the work of cousins Furne and Tournier, who produced nearly 40 series of stereoscopic views between 1857 and 1864. Presently, they are considered to be among the primary French producers and publishers of stereoscopic cards during the golden age of the technique, with nearly 7,000 stereoscopic photographs.

Much like Paz dos Reis, Furne and Tournier documented a wide variety of subjects in the course of their activity: numerous travels—Brittany (1857–1858), the Pyrenees (1858), Provence and Languedoc (1858), Cherbourg (1858), Switzerland (1860), castles and imperial residences (1858–1859); genre scenes and dramatized fictions, such as *Groupes divers pour le stéréoscope* (1857), *L'Alphabet des costumes* (1859), *Un mariage sous Louis XV* (1859), and *Une maison à Paris* (1860).

Following Claudet's experiments, the French partners also published several collections and sought ways to animate photography, notably with the collection of cards titled *Epreuve à Mouvement*. Furne and Tournier revisited Claudet's 1852 concept in 1861 and published a series that depicted the distinctive movements of diverse professions. Although this collection was not particularly successful at the time; it is nonetheless of great importance, perhaps due to its attempt to develop technology capable of creating the illusion of movement [23].

Jules Duboscq introduced the Bioscope, a projector invented by brothers Max and Emil Skladanowsky in 1852, which combined principles of the Stereoscope and the Phenakistiscope [24] to create an animated and relief-based viewing experience, marking an evolution in stereoscopy, as announced in the 1853 poster.¹¹

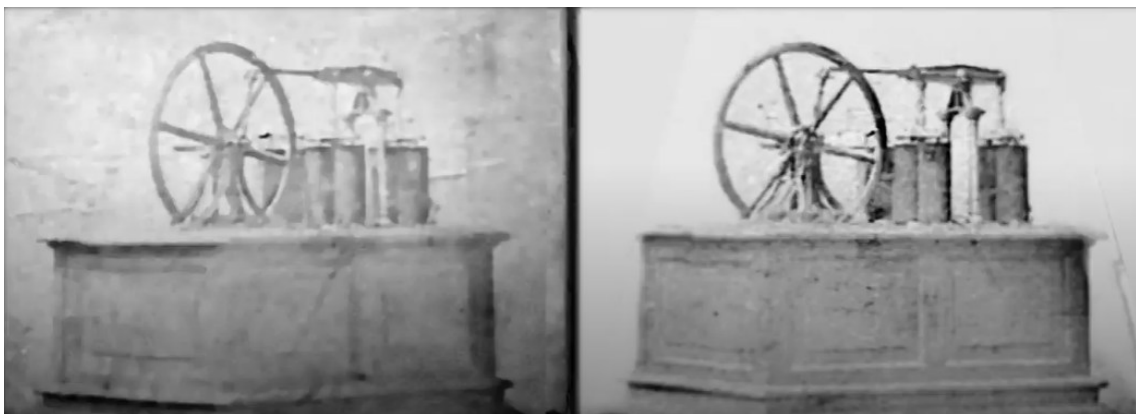


Figure 3: 1852 The Bioscope of Duboscq. (<https://archive.org/details/1852-jules-duboscq-stereoscope-fantascopie-ou-bioscope-anamorphic-3-d-version-cop>).

Despite its innovative nature, the Bioscope encountered substantial technical obstacles, which ultimately led to its abandonment and restricted commercialization. Duboscq established a significant legacy in the history of photography and three-dimensional cinema through his groundbreaking work in stereoscopic animation, which resulted in the development of numerous Bioscope models [25].

¹¹ "The STEREOSCOPE reproduces with marvelous fidelity all the objects of nature and art: the flat images of statues, bronzes, and crystals appear with the projections and the characteristic appearance of the material that forms them, portraits with their modeling, landscapes with their perspective. The BIOSCOPE goes even further, as it adds movement to the relief of the objects and, so to speak, life."

Eadweard Muybridge and Étienne-Jules Marey, among others, utilized chronophotography to capture numerous images of a subject in motion, thereby establishing a foundation for animation and cinema [25].

Photography was already in progress in Porto by 1856. João Baptista Ribeiro was among the first to experiment with daguerreotypy, and during his tenure as director of the Academy (1848–1853), he created the renowned portraits of Alexandre Herculano. In 1856, Pedro Cochat returned to Porto with the collodion technique—a form of photography using negatives that was more affordable and reproducible—which quickly replaced the daguerreotype. Despite Miguel Novaes' efforts to defend the superiority of the daguerreotype through articles published in the *Associação Industrial Portuense* (AIP) journal, he also traveled to Spain in 1856 to learn and adopt the new process [26].

Industrial expansion and the proliferation of photographic studios were the hallmarks of the 1880s. União and Biel were the largest photographic houses in 1881, and numerous others emerged during that time. Electrification and the horizontal concentration of capital enabled the modernization of studios and the production of thematic albums [26], which was one of the relevant aspects of the historical context in which Aurélio da Paz dos Reis developed his work—a prominent figure in photography and a pioneer of cinema in Portugal.

During the 19th century, the development of photography and the visual image created a fertile environment for Aurélio da Paz dos Reis to innovatively explore stereoscopic photography and cinema, using visual effects to document Republican and cultural events¹².

Reflections on the artistic questions of the gaze in photography and the representation of the *mise-en-scène* indicate how the calculated use of stereoscopic practices gives a realistic effect to the work of Paz dos Reis.

Hypotheses regarding the treatment of stereoscopic views within a cinematic language using special effects are invoked by issues such as the cinematic representation of *mise-en-scène* in Paz dos Reis's photographs and the technical resources applied to stereoscopic images.

Bill Nichols' [41] classification suggests that this documentary could be classified as an essay film, but it could also be regarded as an expository and reflective documentary. The expository style is apparent, as it is founded on events, facts, and arguments that are pertinent to the central theme—the stereoscopic photographic work of Paz dos Reis as a method of capturing reality. It includes a voice-over narrator who verifies the content being displayed, thereby ensuring objectivity through enunciative strategies that are designed to establish a sense of neutrality, distance, and omniscience. The documentary's arguments are presented by the narrator, who serves as an "authority figure." The documentary's scientific and pedagogical tone is bolstered by the testimonies of experts, while the images serve to substantiate the narration.

¹² Some visual effects that Paz dos Reis may have applied to his stereoscopic photographs, in addition to movement, could have included retouching, the application of "French Tissues" to simulate the transition from day to night, and the use of color. The color was possibly attempted in his film "Dança Serpentina," a lost film that Paz dos Reis replicated for Portugal, and in its French version, it resulted in the first attempt to introduce color into cinema.



Figure 4: 1910 Hilda Ophelia Paz dos Reis. Photograph by Aurélio da Paz dos Reis. (PORTUGUESE CENTRE OF PHOTOGRAPHY).

It is possible that the reflective component does not exclusively concentrate on facts and arguments, but rather on the presentation of a concept that requires further consideration. As a result, it may eliminate the necessity for factual evidence, thereby doing away with the need for factual proof and focusing on the exploration of reality in a manner that encourages critical thinking in the viewer. This model is recognized for its more subjective and contemplative approach. The documentary may therefore support research based on artistic practice.

The awareness of time unfolding is central in Chris Marker's film *La Jetée* [27], both thematically and formally, especially in the relationship it establishes between photography and cinema, comparable to the experiences Aurélio da Paz dos Reis had with stereoscopic photography. Teresa Flores argues for this perspective in her article, in which she envisions an unlikely encounter between these two filmmakers [28]. Particularly through the utilization of

photographic sequences created by Paz dos Reis, Chris Marker's photographic films can serve as an inspiration for the use of photography as evidence of truth. These sequences enable the narration of episodes that Marker documented.

Some films from Portugal that are about Paz dos Reis show different parts of his life and how he helped start the film industry in Portugal. However, his work with stereoscopic photography is still mostly unknown.

Aurélio da Paz dos Reis' photographic work is the subject of a documentary that draws inspiration from the films *Dawson City: Frozen Time* (2016) by Bill Morrison [29], *Finding Vivian Maier* (2013) by John Maloof and Charlie Siskel [30], and the documentary *Amateur* (2016) by Olga Ramos [31], [32]. Using recreation and direct access to materials, each endeavor to recover and appreciate forgotten historical and artistic archives while ensuring that their essence is preserved to the greatest extent possible. In the context of Paz dos Reis's photographic archive, this could serve as an incentive to investigate his stereoscopic collection. This could involve displaying stereoscopies in pairs and transferring their motion to animated GIFs.

The combination of interviews, archival material, and an engaging narrative approach in these documentaries exemplifies effective methods for exploring and presenting the work of Paz dos Reis, making it accessible and meaningful to contemporary audiences.

Consequently, the historical documentary has the capacity to narrate narratives drawn from Aurélio da Paz dos Reis's photographic archive, in addition to compiling a collection of information, testimonies, and images that contribute to the comprehension of his stereoscopic work—both in an artistic and documentary context.

Aurélio da Paz dos Reis's stereoscopic work is a critical contribution to the history of photography and cinema in Portugal, providing a distinctive viewpoint on the country's social, cultural, and political life in the early 20th century. Nevertheless, to develop a comprehensive understanding and appreciation of this legacy, it is imperative to implement innovative methodologies.

A historical documentary is currently in the process of being developed to preserve and promote the legacy of Aurélio da Paz dos Reis. The documentary will begin with one of the author's stereoscopic photographs. Rather than serving as a mere record, this image is investigated as a central narrative device that has the capacity to elicit various temporalities and meanings [33]. The author's approach to the image, the objects in the scene, and the composition of the *mise-en-scène* are all critical visual cues that inform the development of the filmic narrative. The photograph thus becomes a performative and interpretive space, in which each element—from framing to attire, from posture to visible artifacts—contributes to evoking the social, cultural, and political contexts of the era. It facilitates a more comprehensive understanding of Paz dos Reis's identity and his contribution to the development of cinema in Portugal.

In addition, an open-access platform that integrates research, preservation, and dissemination is being developed in parallel to his work. The digital gallery will feature stereoscopic images, biographical and historical content, and excerpts from the documentary. Additionally, academic resources and information about events and exhibitions will be included. The website's structure is designed to engage a diverse audience, including researchers, enthusiasts of visual culture, and film heritage, by fostering a dialogue between visual and textual dimensions [34], [35], [36].



Figure 5: 2025 Teaser photogram of the documentary *How I Met Hilda* by Isabel Pina and Mika Helminen. (<https://vimeo.com/714764504?share=copy#t=0>).

The "object lesson" [37] is a critical pedagogical methodology that, as promoted by Swiss educator Johann Heinrich Pestalozzi, involves the direct interaction with physical artifacts to pique curiosity before the application of language and reason. Theorists such as John Locke, René Descartes, and Francis Bacon have contended that aesthetic experiences—including curiosity and wonder—are essential for effective learning since the 17th century.

Filmmakers utilize experimental techniques to recycle and recombine historical film materials to create sensory experiences. Historical reconstructions, including the Nitrate Picture Show at the Eastman Museum and Étienne-Jules Marey's smoke experiments at the Musée d'Orsay, are practical examples [37].

5. Conclusion

Reimagining the past confluences of technology, aesthetics, and media archaeology is made possible by the imaginative reconstruction of Aurélio da Paz dos Reis's photographic and cinematographic legacy, especially through documentary film. Modern retellings of Paz dos Reis's work can produce fresh experiences that go beyond conventional historiographical methods by drawing on techniques like those mentioned by Ellis and Williamson, such as historical reconstruction, multisensory engagement, and the blending of archival and digital media. These tactics highlight the enduring effective and pedagogical power of early visual technologies in addition to putting historical innovations into dialogue with contemporary tools.

Paz dos Reis's progression from film to stereoscopic photography is a prime example of a critical juncture in the non-linear trajectory of media development, in which newer technologies do not necessarily render older ones obsolete, but rather coexist and develop in intricate, hybrid forms. His stereoscopic photographs, which are frequently disregarded in canonical accounts of Portuguese visual culture, are presented here not as a diversion from cinema but as an alternative method of interacting with reality that emphasizes depth, detail, and immersion. Paz dos Reis stands at a singular historical crossroads, where media practices were constantly being redefined by cultural, technological, and economic factors, thanks to this oscillation between fixed and moving images, between photographic realism and cinematic illusion.

In addition, his stereoscopic work prompts us to reevaluate the materiality of visual media and the way early image-making technologies foreshadowed modern advancements in virtual and

augmented reality. His stereoscopic portraits and scenes predate the techniques that would later become essential to immersive media environments in terms of their visual depth and compositional intentionality.

Paz dos Reis created an extensive visual archive that serves as both artistic expression and historical testimony through his meticulous documentation of political events, everyday life, and social transformation in early 20th-century Portugal [38], [39], [40]. A complex, multifaceted reading of his work is made possible by the possibility to activate this archive through film, especially through essayistic and contemplative documentary formats. An approach like this promotes critical thought on the processes of memory, mediation, and historical reconstruction in addition to highlighting the artistic and documentary significance of his stereoscopic imagery.

The present development of a historical documentary and an accompanying digital platform provides a compelling response to these possibilities. These programs seek to contextualize and tell the story of Paz dos Reis's life and legacy for modern audiences, making them both deeply interpretive and preservative endeavors. These projects engage with his work in ways that are scholarly, approachable, and emotionally poignant by fusing historical documents, expert interviews, biographical material, and stereoscopic visualizations.

To conclude, Aurélio da Paz dos Reis' legacy is significantly more than a mere footnote in the annals of Portuguese cinema. His innovative work in stereoscopic and moving images encourages continued investigation into the evolving visual technologies, the dynamic interactions between media forms, and the cultural imaginaries they influence. Innovative and interdisciplinary methodologies—rooted in both academic research and artistic practice—that are capable of bridging historical inquiry with contemporary media experimentation are necessary to comprehend his contributions. His vision may continue to inform and inspire new generations of scholars, artists, and audiences through the implementation of such methodologies.

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