

The Invention of Father Díez: the Unknown History of the Genius That Made Cinema Possible

The ignored story of the priest who contributed to the birth of the most important invention of the twentieth century: Fr. Mariano Díez Tobar, CM

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I have a Vincentian uncle, like others have an uncle in America. I mean: he is a member of the Congregation of the Mission. Saint Vincent de Paul was a seventeenth-century Frenchman who devoted himself to caring for the poor during the French Civil Wars. He founded the Congregation of the Mission and the Daughters of Charity in the first third of the century, and died in 1660, at seventy-nine. Two centuries later, Mariano Díez was born – we will talk about him in a moment –, and, some decades later, my uncle was born. My uncle likes the cinema a lot, even more he likes to fix devices. He also loves “The Pink Panther” cartoons. One day, fifteen or twenty years ago, he told me: “I am going to tell you something ...” And so he did. Then he went to the **library of the house of the Congregation of the Mission in Salamanca** and began to search with his reading glasses in the “Anales de la Congregación.”¹ [Annals of the Congregation]. The next day he gave me a lot of photocopies, exact duplicates of several numbers of 1933 (from volume 41, as I recall) that confirmed what he had told me, in a text written by chapters by the hard-working A. Alonso, a prominent Vincentian, that recounted more or less the following...

Mariano Díez Tobar was born in Tardajos [Spain] on May 21, 1868, seven miles from Burgos, beside an old fort. He learned to read and to count numbers very soon, while his parents farmed. "I have nothing else to teach you," the teacher said one day, praising him on the one hand and confessing on the other that that was all he knew; so Mariano continued studying seven miles away in Las Quintanillas, on the same road as Villadiego, which he walked on a daily basis. There, **he also stood out as a student before going to seminary school in Sigüenza**, which he entered in 1882, aged fourteen. From there he went to Madrid as a seminarian, and there developed a talent for the physical sciences and mathematics. In the ecclesiastical studies of the time these subjects did not quite fit – so he was transferred in 1890, just turned twenty-two, to Murguía (Álava), where he caught the enthusiasm of the founder of the new school, who dreamed of it becoming a kind of university for the Basque Country. **There he began to teach**, although he was still a student, and there began the problems that would accompany him the rest of his life, and that have meant that today almost nobody has heard of his achievements, which we will explain right away.

In the *Anales de la Congregación*, Alonso recalls the words that Dr. **Rafael Navarro**, director of the hospital of the Charity of Palencia, dedicated to Mariano Díez a century ago: "**I have known few people who were as wise, deep, erudite and complete**

¹ Spanish magazine of the Congregation of the Mission, for internal use, published several times a year since the end of the 19th century, to our days [translator's note].

as **Diez**. He had an encyclopedic knowledge. He had it very systematized, but his system was a bit chaotic and confusing. **He possessed the erudition of a Renaissance sage.**" Mariano, busy with teaching and praying, was also attentive to each scientific advance, although – in his religious order – such progress was not promoted, because they would necessarily distract him, especially if they were an inventions as uncertain as the one my uncle spoke to me about...

The Java shadows

The invention of Father Díez has its origins in the **Java shadow puppet theatres**, very similar to the Chinese ones, which were newly popular in the 19th Century. They were the successors to inventions such as **Plateau's phenakistiscope** (flat disc in which the different phases of a movement were drawn) also Reynaud's optical theater, and with the **Edison kinoscope** in the 1880s. They were inspired by the research of Muybridge, a photographer of English origin who knew how to capture, with several cameras, the cycle of galloping horses. The evolution concludes with the Lumières, who had not yet invented anything, but who were doing business with lifelong photography (still not very long), shortly before changing the world forever, which would happen a little later, in 1895. But there is a missing name in this story, a missing link... Why did the Lumières one day appear with **an artifact that reproduced at last the moving image** – a frustrated aspiration of researchers from half the world?

Let's jump back in time. At the beginning of the century, the Barcelona magazine "El mundo científico" [The scientific world] mentions – in its number 568, pages 13 and 14 – **Father Díez's lectures**, to which the following was added: "The lecturer authorizes, with absolute disinterest, anyone interested, to put into practice any of the ideas or concepts they may find new in his conferences." **Mariano did not intend, as you can see, to market anything.** And later: "From one of them the cinematographer was created, according to verified testimonies, such as the French engineer A. Flamereau who attended in 1889 the conference of Father Mariano Díez on the cinematograph. Immediately, with the consent of the lecturer, he had the apparatus built in Paris. Lumière was the one who made the films; Demeny with Pathé were only new builders; Marey was the first to take advantage of the idea and applied it to the study of the flight of birds. **Whereupon the cradle of the cinematograph is neither France nor the United States, but Spain.**" Bingo!

"The scientific world" mentions 1889, but according to Esteban it must have been later (Mariano was still a student), probably in 1892, within three years of the invention of the cinematograph. How is it possible? Flamereau was Lumière's representative in Spain, and Father Díez – who passed his notes to him in Bilbao – had **given a lecture at Murguía's seminar with the following theme:** "The cinematograph: description of the apparatus by which images of people, and other things, whether they exist at the moment, or no longer exist, living as if they were reality, with their colors, movements, etc., before our eyes." The talk developed the "industrial problem" of photography and **anticipated the secure profits of its use and enjoyment** once the challenge of chronophotography was found. He spoke of the "succession of photographs, not with continuous movement, but with intermittences or intervals of repose, so that, taking advantage of the inertia of the retina, there would be time to succeed one another and thus produce the illusion of movement." **Which is, exactly, the definition of cinema.**



Father Díez at the Museum of Natural History, which he founded at the school of Villafranca.

The formula

Mariano Díez Tobar, disinterested and candid, gave Flamereau **the mathematical formula that allowed to synchronize the passage of the film** with the Maltese cross shape of the camera shutter and base, precisely like the future success of the Lumière. And they – grateful, at least – invited him, three years later, to the presentation of the invention in Spain, in 1895. But, as the *Anales* of the order say, "nobody remembers him anymore".

Mariano was assigned to Villafranca del Bierzo in 1900. There he developed most of his work and contributed fundamentally to **the creation of his natural history museum** (see photo), with almost four thousand pieces, and a physics laboratory. Several articles, signed by him, raised his profile which was a great scandal according to the Visitor and the Superior General of the order because a priest's name appearing in block letters was a sign of unforgivable vanity. However, Mariano had not sent the writings, his name had been used without permission.

In the museum, the operation of several devices – to which Father Díez himself did not invent – was collected, namely: a machine that drew harmonies from the sounds; a device to preserve the wine; a clock whose power was the voice of the man and which worked for ten years hanging on the blackboard of a Villafranca classroom, activated only by the sound of the lessons. Also; **a clock without strings that marked the hours and minutes**, and not in jumps, like the other clocks, but in a continuous way; **the logotype**, based on the principle that "it is physically possible to use the energy of the word-sound to leave it printed on paper," with so many resonators "as many sounds as they want to take advantage of our language." The **iconophone**, which applied the sound of the phonograph to the cinematograph and thus anticipated the sound film; or the **iconosteleoscope** – or iconoscope –, which would allow images to be viewed from a distance and consisted of a transmitter (a dark camera with a thin sheet of lead antimony

sulfide lead:semi-conductor - as the background), a receiver (another dark camera with a white glass background) and a synchronous regulator, which could constitute a primary description of television, but without advertisements: all advantages!



Cinematographer invented by Father Díez, exhibited at the Baños de Molgas Museum (Orense).

Obedient and methodical

Father Mariano Díez, "obedient and methodical in everything," **destroyed all his notes**. He just burned them, without anyone, apparently, thinking it was wrong. He had come to be persecuted and slandered, not so much, perhaps, by envy but to ensure he paid attention to his chosen obligations as priest. Often, he had to defend himself before his superiors: "No, dear father Visitor, I have no heretical book nor being in the Index. The philosophical and scientific works that I read most are: **Saint Thomas, Suárez, Balmes, González (philosophical studies) and Lacense philosophy**. Yes, I have the Ideology of Rosmini, but in an edition purged of the ontological propositions. The works of physics and mathematics that I study and handle every day do not seem to offer any danger of contagion."

In *Los Milagros Ethnographic Museum*, in Baños de Molgas (Orense), you can visit today **the projector that Father Díez had built more than a century ago**. My uncle would not have known how to invent it, but he would know, I think, how to fix it; it is exposed with discreet pride, in a somewhat incongruous way, along with some traditional Galician tools, with its brass gear wheels, its perforated film (almost fossilized, black as coal), its drag chain, similar to one from a bicycle; with its sliding lens to ensure focus; with its iron structure and its handle with wooden handle. **A glass showcase protects it**. Mariano Díez Tobar did not reach his sixties. He died in Madrid almost a century ago, on July 25, 1926. He was moved from León when he began to feel bad, in the midst of some spiritual exercises: his death was, it seems, as itinerant as his life.

It is not necessary to fantasize persecutions or force convenient allegories, or put a mirror in front of human misery, or meditate on the past from here or from there on the present times – anyone can reflect according his taste, inclination and character –; not even claim a prize of relief with the name of Mariano, an award that would not hurt either, although the prizes tend to do so. But we do have to **remember a great scientist** who perhaps we should know more, a religious first of all by his own decision, as Esteban reminds us since 1933. "Following the example of his founder, Vincent de Paul, he considered that **the merit was in silence and in the recognition from God**." Each one chooses who he is and takes care of himself, does what he decides to do, believes in what he chooses to believe and, if he is to be consistent, takes control of his life. Mariano Díez Tobar did it. All kinds of degrees and doctorates were offered to him, which he did not accept. He did what he felt and reasoned, as he best knew and could. He never gave importance, neither to himself nor to his ideas (neither to his inventions, which were, for him, just curiosities): his way of thinking and living made it easy for us to forget him. It is time to claim him. At least, that.