

# Radioactivity on tour: analyzing the public uses of Eve Curie's picture at the Portuguese Institute of Oncology (1940)

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**Abstract.** On January 1940, Eve Curie was pictured at the Portuguese Institute of Oncology (IPO). The shot would be reproduced in IPO's Bulletin, a monthly journal of anti-cancer propaganda directed to the general public. Addressing Eve's photograph as a picture, endowed with epistemic value, I seek to understand how it became an important tool for Portuguese anti-cancer campaigns. A second picture is considered – that of Marie Curie receiving her 'gram' of radium at the White House (1921) – to show the role that both mother and daughter played in the construction of radioactivity's ambiguous public image. This paper tries to analyze how the public reproduction of the younger Curie's photograph at IPO's Radium Pavilion, the first European facility that followed the safety guidelines of the International Congress of Radiology of 1928, attempted to dismiss public fears over radioactive contamination. Portuguese anti-cancer campaigns needed to gain public support, not only regarding cancer, but also radioactivity, for the latter needed to be trusted if it was to be applied in time to its potential beneficiaries.

## 1 Introduction

On the second floor of the back wing of the *Instituto Português de Oncologia* (Portuguese Institute of Oncology, henceforth IPO) main hospital building in Lisbon, several cabinets showcase multiple objects and images that go through the Institute's history from its opening in 1923. Next to a photograph of a *roentgentherapeutic* apparatus, the picture of a woman in furs in the company of three men is displayed. The *Boletim do Instituto Português de Oncologia* (IPO's bulletin) discloses that this photograph was taken on January 9, 1940. [1, 2] Its caption explains that the woman was Eve Curie (1954-1987), the youngest daughter of the world-famous Nobel prize physicists Marie (1867-1934) and Pierre (1859-1906). The three men were Francisco Gentil (1878-1964), IPO's founder and director (until 1961), Bénard Guedes, IPO's chief radiologist, and Raymond Warnier, director of the French Institute in Portugal. [1]



**Fig. 1.** Picture of Eve Curie, Raymond Warnier, Francisco Gentil and Bénard Guedes. Source: *Boletim do Instituto Português de Oncologia*, VII, 1 (1940)

The Bulletin further reveals that Eve stopped in Lisbon on her way to the USA, where she would perform a series of lectures (supposedly) addressing her mother's life and work on the basis of her biographical study *Madame Curie* (1936)<sup>1</sup>. [3] While in Lisbon, the younger Curie didn't however miss the "opportunity" to visit "the establishment where curie-therapy is a standard method of treatment": IPO's Radium Pavilion [1]. Not only she visited the first European facility that followed the safety guidelines established during the second International Congress of Radiology (Stockholm, 1928), but she was photographed with two of IPO's most prominent experts, therefore validating that Eve and "curie-therapy" as a "standard method" of cancer treatment were in close correlation. [1] By referring to it as picture, instead of as a photograph [4], I seek to analyze how its uses made it so important for Portuguese anti-cancer propaganda.

In order to do that, I will add a second picture to the analysis, that of Marie Curie receiving 'her gram' of radium, donated and produced in the United States, at the White House (1921) – actually, its symbol, a key to open a "lead-lined casket specially built to contain the tubes" left safe in the factory, since the gram, produced by the Standard Chemical Company, was obviously too dangerous to handle in the ceremony. [5] This picture was the result of a massive fundraising, mostly subscribed by women and (male) physicians, masterminded by Marie Meloney (1878-1943), editor of the women's magazine *The Delineator*. [6] Meloney used all available social mechanisms – private funding and mass media, celebrity culture and emotional appeal –, to turn Marie Curie into a public figure of hardship and womanhood, at a time when North American women had just won national suffrage. [7] But she also turned her into a public image of radioactivity, the tool that could potentially "end all cancers". [8]

<sup>1</sup> It is also known, however, that Eve progressively incorporated the topic of "French Women and the War" into her lectures, as she had been appointed head of the feminine division of the Ministry of Information following the outbreak of World War II.



**Fig. 2.** Marie Curie (holding the casket key in her right hand) and US President Warren Harding walking down the White House. 1921. Source: Library of Congress.

However, the world was soon to know that what could save, could also kill. One of radium's victims would be Marie Curie herself, as far as the story goes in her daughter's biography (the chapter "The end of the Mission" dealing with her death). [5] Radium was harming lives outside the scientific realm too. In 1925, two French engineers died after handling radium and thorium X in a private factory. [9, 10] Several deaths were also reported in a North American watch factory in Orange, New Jersey [11, 12, 13], in what became known as the story of the 'Radium Girls', which made into sensationalistic headlines in the press. [14, 15] The progressive incorporation of radium into the public realm, through science popularization, anti-cancer propaganda, and goods ranging from war weapons to domestic products, eventually exposed the element's weaknesses.

These needed, thus, to be "contained", a task especially took on by anti-cancer campaigners who fought to persuade the public that radium was trustworthy so radiotherapy could reach its potential beneficiaries in time. Marie Curie's public speech at the American Society for the Control of Cancer's (ASCC) annual dinner in 1929 – the year she received her second 'gram' at the White House – is a good example of containment initiatives<sup>2</sup>. [16, 17] IPO's Bulletin was also a good case, for it followed the model of ASCC's public campaigns. [5] The Portuguese Bulletin regularly reported on and argued against the current of sensationalism over radioactive contamination in multiple ways. More often than not, its strategy rested in assuring that its Radium Pavilion, projected by the renowned architect Carlos Ramos and following rigorous international guidelines, was fit to safely store and operate the element discovered by the Curies.

<sup>2</sup> In 1929, Marie Curie received (instead) a \$50,000 check, for radium could "no longer be bought" in North America, but from the Belgian supplier *Union Minière du Haut-Katanga*. During her second visit to the USA, Marie Curie denied any public appearances, yet she agreed on being ASCC's annual dinner guest of honour.



**Fig. 3.** IPO's Radium Pavilion, undated. Source: Mário Novais. Biblioteca de Arte, Fundação Calouste Gulbenkian, Lisbon, Portugal.

In that same building, Eve would be photographed on January 9, 1940. The photograph was quickly turned into a picture by being used as a means of validation by anti-cancer campaigners, a guarantee for their audience. It became a token of scientific expertise at a time when the latter was being contested. If radioactivity needed to leave the realm of science and travel to the public sphere, the latter needed to be reminded of its primary point of departure: science. And science had a name: Curie.

Like scientific objects, images of scientists or used by scientists are endowed with cultural and historical meanings by those who use them and make them circulate in society. As historians of science, it is, thus, our duty to make those meanings and uses explicit, and to explain their constant re-creation. By addressing these two pictures – Eve Curie's at IPO (1940) and Marie Curie's at the White House (1921) – I aimed to analyze how they were used to construct an image of radioactivity in many ways, inside and outside the scientific realm, and often with unpredictable afterlives. Eve Curie's picture can especially be analyzed as a “matter of containment”, that is, a material object whose recurrent use sought to control and dismiss the fears and anxieties of the apparently invisible audience of the photograph: the public of anti-cancer campaigns and propaganda.

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