

# The Curie Family and Their Japanese Students

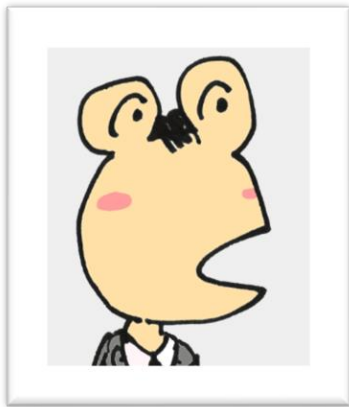


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Good evening to you everyone, though it's morning in Japan. I'm Keiko Kawashima from Nagoya Institute of Technology. Today, I would like to tell you about **three Japanese who studied under scientists of the Curie family**. These Japanese are likely unknown neither in the United States nor Poland, and their lives and careers show you what value Marie Curie had for Japan in the first half of the 20th century.

# 1: The Curie Family and Three Japanese Scientists

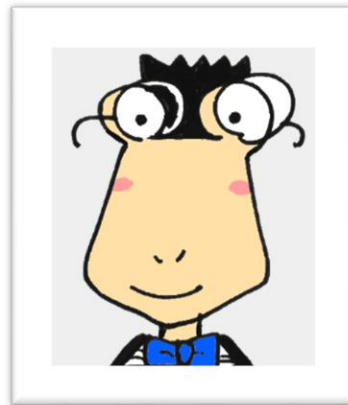
The two men on the left were **Marie Curie's students** and studied polonium and thorium at the Radium Institute in Paris. The woman on the right is **Frédéric Joliot-Curie's student**, she studied the beta spectrum of artificial radioelements, for example Vanadium 52 at the Laboratory for Nuclear Chemistry in Collège de France. The relationship between these three and the Curie family's scientists is shown in the next slide.



**Nobuo Yamada**

1896-1927

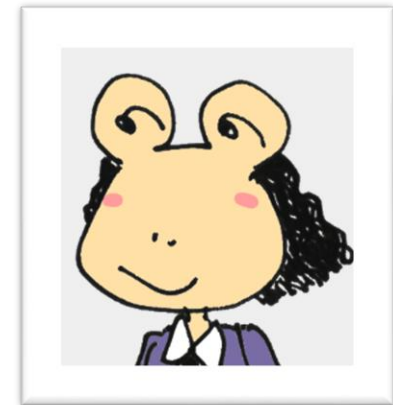
Paris, 1923-1925



**Tadashi Onoda**

1894-1982

Paris, 1926-1927

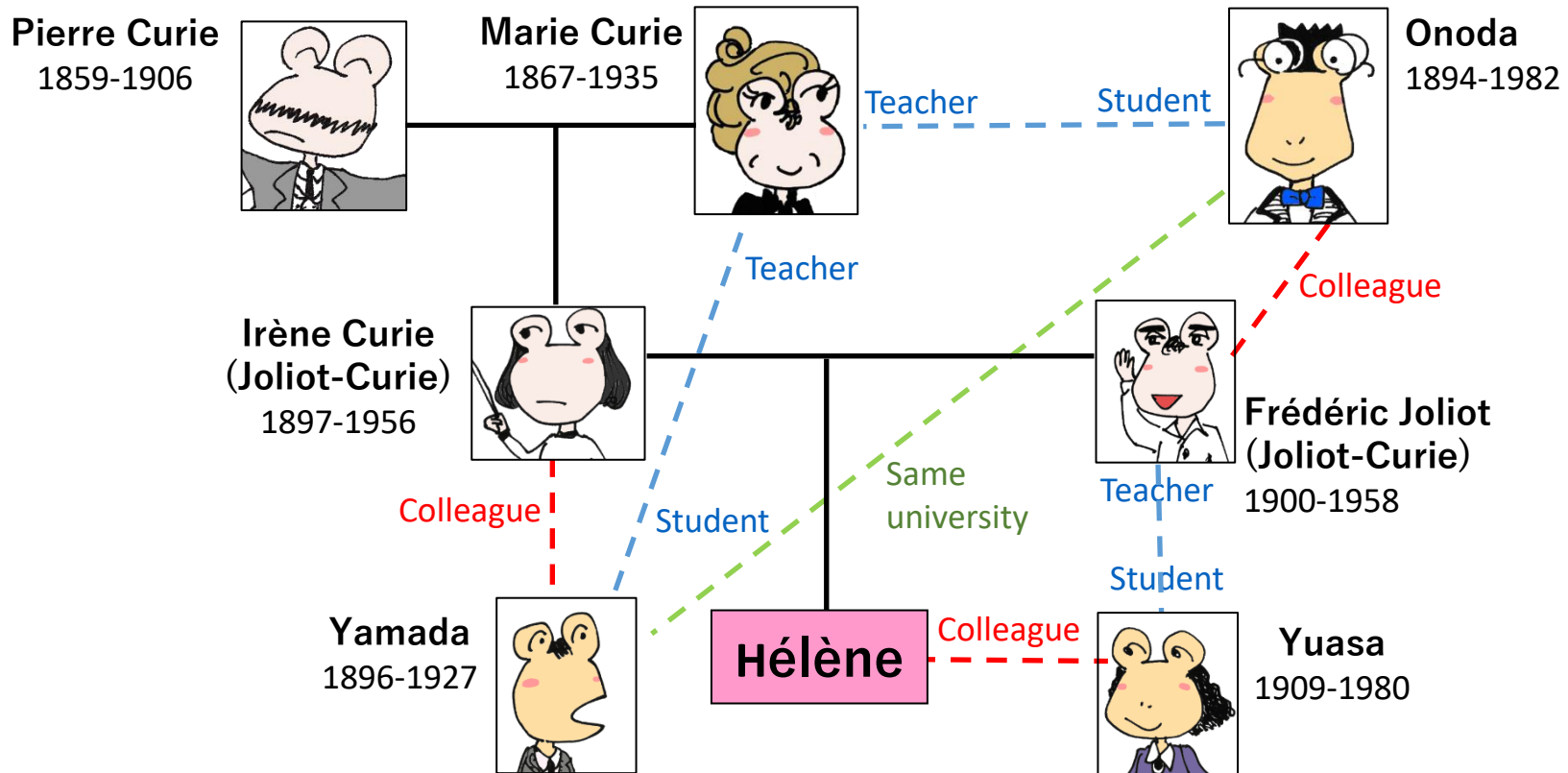


**Toshiko Yuasa**

1909-1980

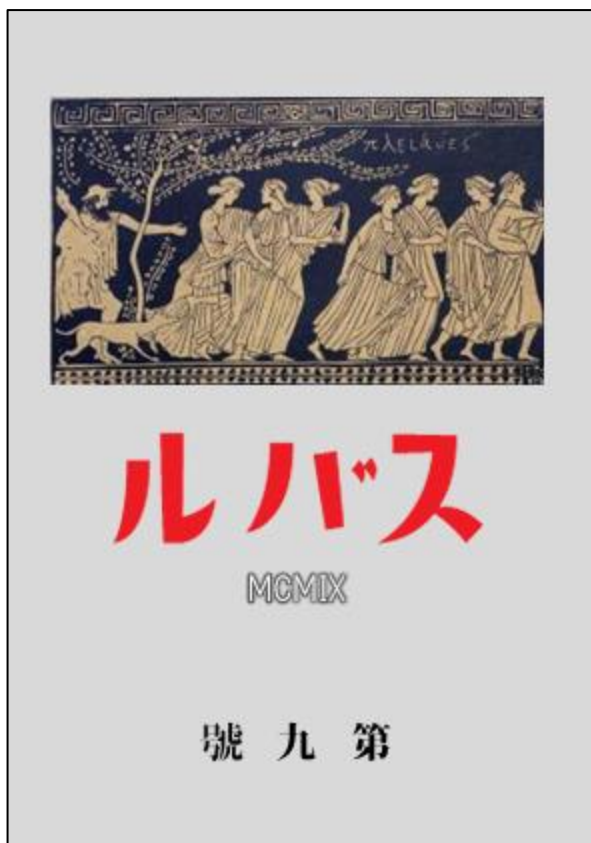
Paris, 1940-43, 1949-80

## 2. Teachers, Students and Colleagues



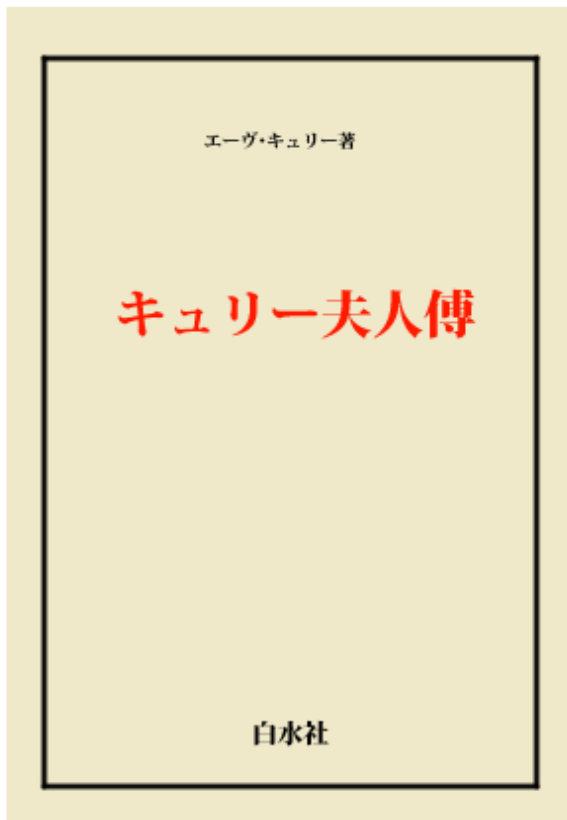
This shows **that Yamada collaborates with Irène** also, and **Onoda with Frédéric**. Yuasa initially intended to work at the Radium Institute to which Irène belongs. However, because of World War II, she could not achieve her first intention due to the rules of the army, so she studied under Frédéric. Yet, one of the reviewers of Yuasa's Ph.D. dissertation was Irène. And when Yuasa returned to France after the war, she also collaborated with Hélène, the Joliot-Curies' daughter. So **Yuasa has a close relationship with this family**. These three Japanese, especially Yuasa, longed to work for Marie Curie since they were in Japan. How Marie was known in Japan in the 1920s and 1930s.

### 3. Marie Curie in Japan-Ohgai's articles



Probably, an interesting early example of the attention to Marie Curie in Japan is the numerous articles appeared in “Mukudori-Tsushin,” the column that introduced Western culture in a monthly magazine named *Subaru*. The author was **Ohgai Mori**, a famous writer and medical doctor, who studied in Germany. From 1910 to 1912, Ohgai reported that Curie had refined metallic radium with André Debierne, won the Nobel Prize for the second time, and the Academy of Sciences rejected her membership, and so on. These topics were reported in almost real time. It seems that **Marie Curie was widely known in Japan after World War I.**

## 4. Japanese Translation of Eve Curie's Biography, *Madame Curie*– Published Same Year in France (1938)



In 1937, when the Japanese translation of *Madame Curie* by Eve Curie was planned, Marie Curie was already a well-known public figure in Japan. There are four reasons: first, **the Japanese translation was published in 1938, the same year as the publication in France.** Second, the four Japanese translators were leading and promising French literary figures at that time. Third, the translators describe that Marie Curie is known even to Japanese elementary school students. Forth, the biography quickly became a bestseller and ranked among the books widely read by normal school students, future school teachers. It was welcomed as a woman's career story, which had not existed in Japan yet.

# 5. Popular Elements of Marie Curie in Japan and in the World

Mother

wife

simple



Marie Curie had gender characteristics that were universally acceptable. **She was a wife and mother.** We should remember the famous speech of Warren Harding, the 29<sup>th</sup> president of the United States. According to Eve's biography, when Marie visited the country for the first time in 1921, "He addressed himself cordially to the 'noble creature, that **devoted wife and loving mother** who, aside from her crushing toil, had fulfilled all **the duties of womanhood.**'"

Moreover, she preferred a simple way of life. She detested luxury. It was easy to present a "saintly" image of her, an ideal female image. This aspect was also welcomed in Japan. And the simple life style appealed to Japanese sensibility. Marie Curie was praised especially by school teachers.

## 6. Marie Curie's Fame in Japan (1)



1. As Marie Curie became famous after WWI (after Pierre's death) in Japan, she was not viewed as her husband's assistant, unlike in France. In Japan, She was always seen as **an independent scientist**.

2. Marie Curie was a good example of **“studying hard will lead to social success,”** an ideal model for modern Japan.

## 7. Marie Curie's Fame in Japan (2)



Modern Japan has an affinity with Marie Curie, Polish in origin and a passionate patriot, who wanted Poland's independence, studied hard and succeeded. She became the glory of Poland. This story moved Japanese so much, because they, forced to open their country in mid-19th century, were always afraid of being a colony of western big countries. In fact, the surrounding Asian countries were already colonized. **At that time, Japan put its goal to catch up with and overtake the Western powers.** Marie Curie's devotion to Poland seemed great to both men and women in Japan.

A translator wrote, "Pure academic quest, service to the motherland, and the desire to promote the welfare of mankind; these are in perfect harmony as a trinity in Madame Curie. It is an example of self-completion by self-sacrifice, vividly demonstrating the beauty of her life." What is important here is "**service to the motherland**" and "**self-completion by self-sacrifice.**" Naturally, the previously mentioned three Japanese scholars who came to work in France also had such an image of Marie.



## 8. Nobuo Yamada, Marie Curie's First Japanese Student

Typical example of “career first” through education in modern Japan

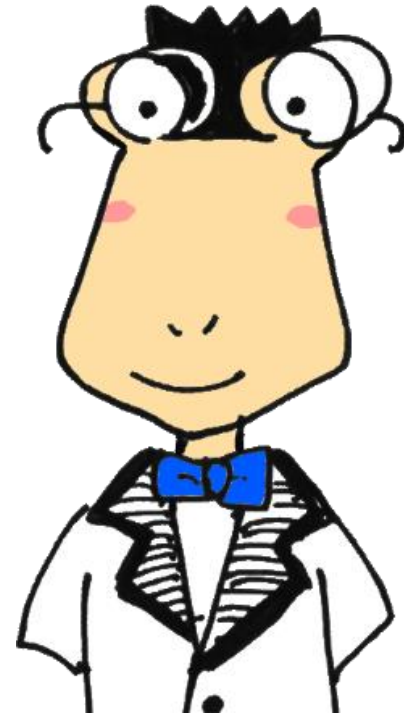


Nobuo Yamada, though he died young due to radiation injury, in 31 years old, he is a typical example of “career first” through education. He, a descendant of farmers in the Edo period, who had no freedom of moving or choice of profession, thanks to power of learning, became a professor at Tokyo Imperial University, Japan's top university. It is actually a career development case unique to modern times. By the way, he is the first Japanese male scientist to have a female teacher and female colleagues.

## 9. Tadashi Onoda, Marie Curie's Second Japanese Student

An example of "social success" through education, in becoming an engineer and entrepreneur by science and new technology.

Tadashi Onoda is an example of a man who succeeded as an engineer and entrepreneur through science and technology. With his European mentors' connections (he had worked with the Curies and Max Bodenstein), he visited factories in Europe, and through factory tours, he gained knowledge about die-casting. He established a company in Japan and improved the science and technology of the field in Japan.



# 10 Toshiko Yuasa, Frédéric Joliot's Japanese Student

A tension : question of women and science in modern Japan. Yuasa's choice, physics is not “feminine,” as compared to gynecology, hygiene, nutrition, *etc.*



Toshiko Yuasa, unlike them, is a symbol of a tension: question of women and science in modern Japan. Yuasa's life is one answer to the question of what happens if a woman chooses physics, a “non-feminine” field in science.

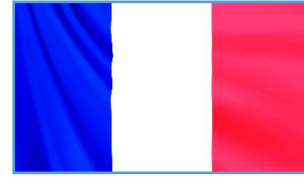
# 11. Men and Women Scientists in Modern Japan (1)

Comparing the three, we note that **very few universities allowed girls to enroll**. Yamada and Onoda, the two men often moved to a new place to study, and eventually both earned a bachelor's degree from Tohoku Imperial University.

On the other hand, Yuasa was forced to go to a school that she could commute from her home in Tokyo, Tokyo Bunrika University. That is, she could not enroll in Tokyo Imperial University, which did not accept female student. Even in the doctoral degree, **the two men got a Ph.D. at Tokyo Imperial University, but Yuasa got a Ph.D. in France.**



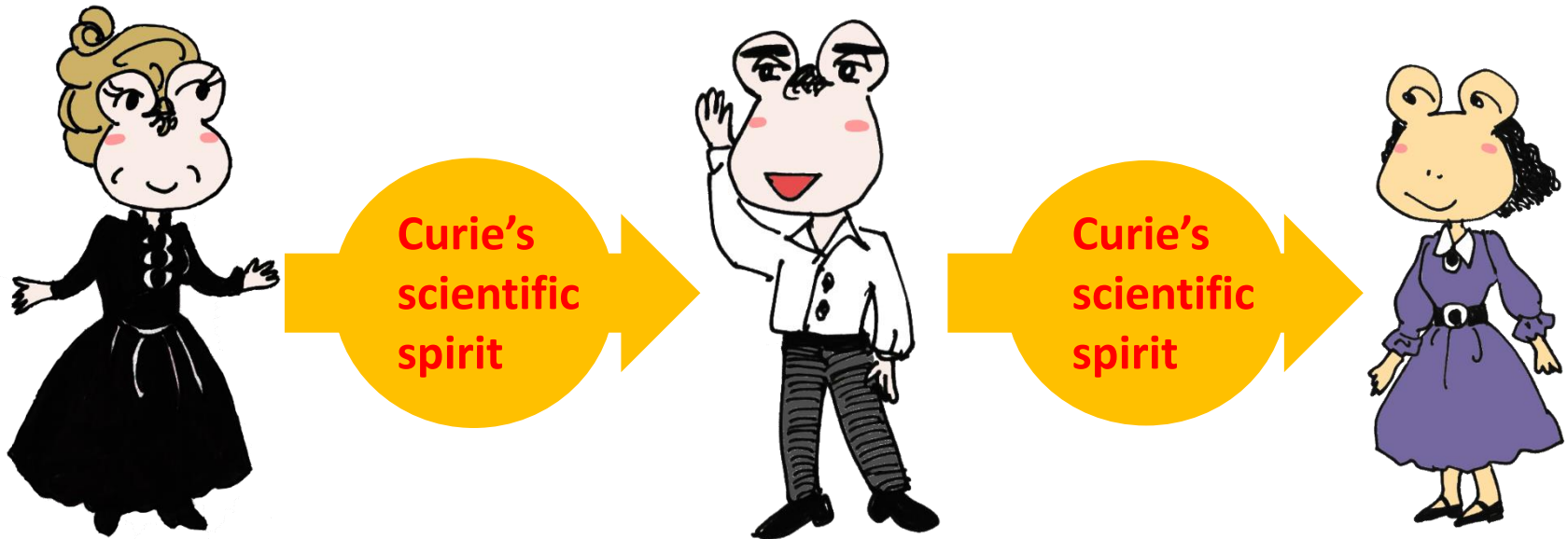
# 12. Men and Women Scientists in Modern Japan (2)



Regarding study abroad expenses, **Japanese government paid or guaranteed for the two men**, Yamada and Onoda, to study abroad, but **Yuasa was a scholarship student of French government**. In prewar Japan, even in science, Japan only paid for women whose subjects were “feminine” to study abroad. However, as Yuasa was not supported by Japan, she got a kind of freedom. **Who decided on France and the Radium Institute** in these three cases? As for **two men, it was not themselves**, but it was their teacher or their school. In contrast to their cases, Yuasa, moved by Joliot-Curies’ articles on artificial radioactivity, **made the decision to go to France for herself**. Of course, such freedom was not unrelated with her isolation in Japan.

In fact, the careers of these scientists after their return to Japan were also different. The two men attained high level positions in Japan without any obstacles. However, a similar road could not be opened to Yuasa in Japan. Eventually she relied on Frédéric Joliot to return to France and end her life in Paris as a researcher at the French National Center for Scientific Research. **Yuasa is the Japanese first female physicist and the first Japanese contributor to the brain drain after World War II**. It is French money and French culture that cultivated the nuclear scientist Toshiko Yuasa.

# 13. Curie Family's Scientific Spirit



Due to these career differences, Yuasa, who did not know Marie Curie directly, became the scientist most influenced by the Curie family's scientific spirit. She took note of Frédéric Joliot-Curie's words as **"In the laboratory, there is no hierarchy, everyone is part of one family"**; **"When someone wants to do research in a certain direction, no one can prevent him/her from doing it, not even the Director."** Yuasa herself describes it as **"In this laboratory, the research itself grows like a living thing, and gender and nationality didn't matter here."** This is just a wonderful tribute to Marie Curie laboratory's tradition, in which a considerable number of women and foreigners worked not as simple assistants but as equal members.

# 14. Toshiko Yuasa, a Big Role Model for Japanese Girls

Toshiko Yuasa has been called as the Japanese “Madame Curie” and became a **role model for Japanese women aiming for science**. Since 2013, her alma mater, Ochanomizu University, has offered the “Toshiko Yuasa Memorial Scholarship Fund for Special Researchers,” in memory of her contributions to science and French-Japanese relations, and to encourage the international activities of young female scientists today. This is an example that the spirit of Marie Curie has been passed down to Japan.

Thank you for your attention.

