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Preface

Luigi Dei takes a very personal approach to presenting the life and achievements of Maria Skłodowska-Curie, saetting them in the broader context of the history of science and European culture between the nineteenth and twentieth centuries. More specifically, he traces the links of the scientist, who twice won the Nobel Prize, with Poland (her homeland) and France (the country in which she lived, worked and made her outstanding scientific discoveries).

Marie Curie also had close bonds with several other countries. England, for example, where she spent several months with her friend Hertha Ayrton in 1912, and where Ernest Rutherford lived, a fellow scientist with whom she collaborated and enjoyed an exchange of views on scientific matters of mutual interest. She also

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had relations with the United States, which she visited twice in 1921 and 1929 to raise funds for the Radium Institutes in Paris and Warsaw. In 1925 Marie also visited Czechoslovakia, invited by the President and the local scientists: the deposits of raw uranium from which she extracted radioactive elements were located in this country.

Italy is rarely mentioned, largely because we know very little about the contacts Marie had with this country. Nevertheless, some information is to be found in her auto-biography, where she wrote: "Following the failure of the German attack, in the summer of 1918 I visited Italy at the invitation of the government to study the deposits of radio-active minerals. I spent a month there, with a certain success since I managed to convince the local authorities of the importance of this new subject".[1]

Although this was her first trip to Italy, Marie Curie was a figure already known to the Ital-

[1] M. Skłodowska-Curie, *Autobiografia*, in: M. Skłodowska-Curie, *Autobiografia* i *Wspomnienia o Piotrze Curie*, Warszawa 2004, p. 45.

ians. After the Nobel Prize of 1903 she and her husband obtained many other recognitions. In 1904 the Società Italiana delle Scienze awarded them the 'Matteucci' Medal, and the discovery of the radioactive elements was mentioned in various publications by Italian scientists. In 1909 Marie Curie became a corresponding member of the Accademia delle Scienze in Bologna. In the same year, the Società Italiana per il Progresso delle Scienze invited her to hold a conference in Italy, but she was forced to decline the invitation in view of the intensive research activity in which she was engaged.

Information regarding the visit to Italy made by Maria Skłodowska-Curie in August 1918 has been provided by Bronisław Biliński, a tireless scholar of the contacts between Italy and Poland, who died in 1996. In the 1960s Biliński was able to talk to people who had known Marie Curie in Italy, in particular Camillo Porlezza, who accompanied the scientist throughout her stay. Biliński also visited the private archive of Professor Vito Volterra, senator and director of the Ufficio Invenzioni e Ricerche, who acted as a go-between with the government to secure Marie Curie's invitation to Italy.

At the time, preliminary research was being carried out in Italy on the radioactive substances present in nature: in stones, mineral water, gases etc. The problem was finding a way of extracting them and exploiting them for practical purposes. The purpose of Marie's visit was to confirm what the Italian scientists had established so far and to identify new sources of radioactive elements, as well as defining methods for extracting and exploiting them.

Marie arrived in Pisa, where she met Camillo Porlezza, who was an official in the Military Engineers Corps at the time, the War not yet being over. She came on her own, and at Pisa station at three o'clock in the morning there was only Porlezza to meet her. His impression was of a slender, ascetic woman who was, at the same time, strong and unyielding in carrying forward the enterprises she undertook.

Marie stayed in Italy for almost three weeks, from 30 July to 18 August. As well as Pisa and the surrounding area she also visited Larderello, Bagni San Giuliano and Montecatini. From there she headed south, towards Napoli, Ischia and Capri, and then headed north again, to Abano, Montegrotto and Battaglia and as far

as Lurisi in Piemonte. Her journey ended in San Remo, where she had a meeting to talk about the research performed, and presented a report to the authorities. The document is divided into three sections, dealing respectively with scientific, practical and administrative aspects.

The scientific mission of Maria Skłodowska-Curie did not end with this report. It also had a practical and organizational significance in that it had a decisive influence on the creation of the Commissione Nazionale Italiana per le Sostanze Radioattive, established in 1919. In a document drafted by Vito Volterra and addressed to Marie Curie, the Italian National Committee indeed thanked her for the major contribution she had made to the research into the Italian sources and deposits of radioactive substances, as well as for her suggestions regarding the research. The document also expressed the hope of collaboration with the Laboratorium Curie and the Commission Française du Radium, in which Marie held a position of the utmost prominence. In that same year of 1918, Marie's laboratory was visited by Porlezza, Volterra and Raffaello Nasini, the scientists who had accompanied her during

her journey through Italy. The Italian scientists also visited the establishments in which radioactive preparations were produced. The following year Marie Curie sent Porlezza the quantity of radiferous substances required to carry forward the experiments in Italy.

Marie Curie returned to Italy again in 1931 to attend the International Nuclear Physics Conference, organised in Rome from 11 to 18 October by the Reale Accademia d'Italia. It was attended by the greatest physicists of the time, including Niels Bohr and Enrico Fermi.

Maria Skłodowska-Curie visited many countries, demonstrating that she and her work were a heritage that did not belong only to Poland and France but surpassed national boundaries, bringing knowledge and assistance to both scientists and the public institutions established for the practical utilisation of scientific discoveries. An excellent example of this approach is Marie's journey through Italy in 1918 and its scientific and practical consequences.