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MARIA SKŁODOWSKA-CURIE – WOMAN, WIFE AND MOTHER

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A WOMAN

On May 20, 1921 during the ceremony of presenting a gram of radium to Maria Skłodowska-Curie, the President of the United States, Warren Harding,¹ called the Polish scientist “the most noble of human beings, the best wife and a loving mother who could combine all the woman’s duties with the immense effort of her fabulous work.”²

It is unquestionable that scientific research in the field of experimental physics was the main aim and sense of Maria Skłodowska-Curie’s life. But this field of science, which a two-time Noble laureate has chosen, was, at those times, “exclusively male.” Since the beginning of her studies, Maria had to overcome difficulties which resulted from unjustified stereotypes

¹ Warren Gamaliel Harding (1865–1923) was the twenty-ninth president of the United States. He was the Head of State between 1921 and 1923. See: L. Pastusiak, *Prezydenci. Stany Zjednoczone od Jerzego Waszyngtona do Ronalda Reagana*, Warszawa 1987, pp. 387–417.

² D. Brian, *The Curie’s Family*, trans. J. Hensel, Warszawa 2006, p. 185.

connected with gender.³ It should be stressed that at the turn of the 19th and 20th century the expression “a woman scientist” was of a pejorative meaning⁴ and what was connected with this notion “...many people perceived a woman physicist almost as exotic as a test tube with radium.” “Few women who were scientists were characterised as manly, coarse, ugly, anguished and hard working, however not making a significant contribution to science. The highest position for the most brilliant of them was to become assistants to their male counterparts, who allegedly surpassed them.”⁵

In autumn 1891 Maria started studies at the Faculty of Mathematics and Natural Sciences at Sorbonne as one of 23 women in a group of 1825 students.⁶ It should be mentioned that in the long history of this university none of the women did not graduate in physics with the highest mark. Maria was also the first representative of “the gentle sex” who defended doctoral dissertation and then received a post of professor at the Sorbonne.⁷ Till the end of 1962 Maria Skłodowska-Curie was the only two-time Noble

³ In the Great French Dictionary from 1860, under „student” we can read “a female companion of a male student”. The term female student – étudiante at Sorbonne also denoted a mistress.

⁴ Scientific arguments against education of women were put forward, first of all, by medicine and naturalism (which has been developing since the 18th century). “A woman, as it was stated, is from her nature weak, nervous, unstable creature with a brain smaller than men’s. At those times, scientists used to treat woman as a sick individual”. See: *Dwa wieki kobiet* – an interview with a historian Professor Michelle Perrot. Interviewer: Robert Sołtyk, “Wysokie Obcasy” (A supplement to “Gazeta Wyborcza”), December 29, 2000.

⁵ B. Goldsmith, *Genius and Obsession. The Inner World of Maria Curie*, trans. J. Szmołda, Wrocław 2006, p. 41.

⁶ D. Brian, op. cit., p. 40.

⁷ W. Śladkowski, M. Willaume, *The White Eagle and the Rainbow of Franks – Maria Skłodowska-Curie*, [in:] *The Fate of Polish Women Abroad and their Contribution In World’s Culture and Science. History and Modern Times*, Materials for the 4th Biography Symposium of Polish Community Abroad, Vienna, September 1–2, 1999, ed. A. and Z. Judycki, Lublin 1999, p. 300.

Prize laureate.⁸ It should be stressed that she was the first and the only scientist who received the Noble Prize in two scientific fields.⁹

But in France the successes of a woman scientist with Polish descent raised extreme emotions. Very often admiration was mixed with disbelief and envy or even a profound hatred. The results which the Curies received together were, by many scientists of those times, exclusively ascribed to Peter. This may be proved by the fact that in 1903 four members of the French Academy of Sciences wrote a letter to the Noble Institute, in which they opted for awarding Peter Curie and Henri Becqueret the Noble Prize. Such action could not have been accidental because it meant a complete exclusion of Maria's input in the research over radiation. It is worth mentioning that one of those professors who wanted to ignore her scientific achievements was Gabriel Lippman, her dissertation supervisor.¹⁰ Also, the majority of journalists did not want to accept the fact that a woman deserved the prize. So only a few newspapers granted Maria a status of an equal partner in the research. The journalists often called Maria Peter's assistant and "dedicated co-partner in her husband's research [who] associated her name with his discoveries."¹¹ A part of her biography written by Ewa Curie can prove how those opinions departed from the truth – "Peter Curie watches the progress of his wife's work with passionate interest. He doesn't take a direct part in it but he helps her giving advice. Since the results of her work are amazing, he decides to give up, for the time being, his research over crystals and joins his efforts to his wife's ones to distinguish this new discovered body. Thanks to this, when the bulk of work makes Maria seek somebody's cooperation, a great

⁸ In 1954 Louis Pauling was awarded the Nobel Prize in the field of chemistry, and in 1962 he won the Nobel Peace Prize. See: F. Giround, *Maria Skłodowska-Curie*, trans. J. Pałęcka, Warszawa 1987, p. 169.

⁹ In 1903 the Curies received, together, the Noble Prize in the field of physics for the discovery of natural radiation and the radiation of polonium and radium. In 1911 Maria Skłodowska-Curie received the Noble Prize in the field of chemistry for works concerning chemical and physical features of polonium and radium and for works concerning the methods of isolation, purification and measurement of activity of radioactive elements.

¹⁰ D. Brian, op. cit., pp. 82–83.

¹¹ Ibidem, p. 124.

physicist and at the same time her life companion is at her side.”¹² In opinion of some scientists the second Noble Prize awarded Maria in 1911 was only a compensation for her ruined reputation due to her romance with Paul Langevin¹³ and not a recognition of her work. After her return from Stockholm, Maria had to stand up to critical articles in French press. One of them announced the invasion of foreigners to Sorbonne and other research laboratories in Paris and that female students looked only for husbands at universities. Another article called Maria “a foreigner scandalmonger who was supported by half-breeds and Jews.”¹⁴

Thanks to her great involvement in 1914 the Radium Institute, which became the main radioactive scientific centre in the world, was built in Paris.¹⁵ According to Maria the building of this new institution was to be a posthumous tribute to Peter Curie’s achievements. As the head of laboratory, Maria was the head of, at first, a few and with the time being, several dozen young scientists. Most of them came from other countries.¹⁶ Employees expressed different opinions concerning their chief. Although some of them regarded her as cold, obstinate and unwilling to help person who with great ease fired persons who could not fulfill her excessive demands, most of them remembered her as warm and positive person. One of her assistants stated that the atmosphere in the laboratory reminded cloister where science was religion and Maria a prioress. According to

¹² E. Curie, *Maria Curie*, trans. H. Szyllerowa, Warszawa 1983, p. 179.

¹³ A familiar term of those two eminent scientists which turned into romance was a great moral scandal. The history of this “banned love” of M. Skłodowska-Curie and P. Langevin hit the headlines of French press (first of all tabloids) for a few months. In the opinion of Olov Enquist, an eminent Swedish playwright and novelist, this romance ruined Maria’s life. See: *Chemiczna formuła pożądania wg Pera Olova Enquista*, Interview by Katarzyna Bielas, “Wysokie Obcasy” (A supplement to “Gazeta Wyborcza”), January 8, 2007.

¹⁴ Maria’s opponents argued that Maria was Jew herself because her names were Maria, Salomea. See: D. Brian, op. cit., p. 143.

¹⁵ There were two departments in the Radium Institute in Paris: physical-chemical which was headed by Maria Skłodowska-Curie and biological-medical. W. Śladkowski, M. Willaume, *The White...*, p. 301.

¹⁶ J. Piskurewicz, *Between science and politics. Maria Skłodowska-Curie in the laboratory and the League of Nations*, Lublin 2007, pp. 55–83.

others Madame Curie belonged to the best laboratory chiefs because she always knew, in details, what each of her subordinates was doing and she devoted each of them a lot of her time.¹⁷ “Not only does Maria notice advantages at once but also faults as well and she objectively states which ones won’t allow this or that young man become a great scientist. She doesn’t like students too self confident but »butterfingers« annoy her more. She was driven to despair by »disasters« caused by improper handling of instruments.”¹⁸ She complained to her close co-partners about one of such butterfingers: “If all were similar to him, you wouldn’t be able to reach much madness in physics!”

During all her life Maria worked among men as a man i.e. without any lenience towards her sex. She reached successes when women at universities were appreciated by men as assistants, at the best, but not as equal partners. Fortunately, that silent and very often sad person with grey eyes and grey hair “never was humble as far as her work was concerned.” According to Maria science was like martial arts. To exist in men’s world, a female scientist had to be armed in tough character and follow the strict dress code, i.e. wear clothes sewn of black cotton. Maria’s biographers underline that as a scientist she did not let her be treated like nobody. “This is her that you must take into consideration. During one of the International Congress of Radiology and Electricity in Brussels, in the presence of the most important physicists, the International Radium Standards Committee agreed that the unit for radioactivity would be the *Curie* in memory of Pierre Curie. Maria was flattered with this recognition but when the discussion on the definition of this unit started, she stiffened. She had her own definition and it would be hers or none.”¹⁹

Concentrated on scientific research Maria did not pay much attention to her appearance. So, some of the scientists, e.g. Albert Einstein, regarded her as not very attractive.²⁰ During her studies at Sorbonne Maria did not part with her “Warsaw dresses” which she often darned, repaired and cleaned. Since she lacked financial resources she walked in the same shoes

¹⁷ D. Brian, op. cit., pp. 190–192.

¹⁸ E. Curie, op. cit., pp. 413–414.

¹⁹ L. Lemire, *Maria Skłodowska-Curie*, trans. G. and J. Schimer, Warszawa 2003.

²⁰ D. Brian, op. cit., p. 132.

until “they fell off her feet.”²¹ Although she could sew (she learned it at family home and at miss Sikorska’s boarding school for girls) she never bought any piece of cloth in Paris to sew herself new clothes. It was for her both a waste of money and time for such “extravagancies.” It should be stressed that she washed smaller parts of her underwear in a bowl which was, according to her, a perfect break from continuous mental work.²² She asked the benefactress of her wedding dress (her brother-in-law’s mother) for a dress that didn’t get dirty easily.²³ “I have only one dress – Maria said – the one I wear every day. So if you want to give me such a present, please give me a practical dress that I could wear later in the laboratory.”²⁴ The wish of Sorbonne’s graduate was fulfilled and under the supervision of Bronisława Dłuska’s sister, a modest Paris dressmaker tailored the future bride dark-blue suit and the dark-blue blouse with blue stripes. Maria was glad that her wedding would be original: without a veil, rings and wedding reception.²⁵ During their honeymoon, which they spent on a bicycle excursion around France, Maria looked rather like a simple peasant than a well promising scientist. She was dressed in a simple white blouse, long dress, good shoes and thick, “not fitting” belt in the pockets of which she kept some money, a watch and a penknife. Because the skirt was too long, Maria decided to shorten it.²⁶ It should be stressed that in those times shortening a skirt was an act of great courage because it violated the existing rules.²⁷ Just before her doctoral dissertation, her sister Bronisława looked through her wardrobe and noticed that all her dresses were very worn out. But she managed to make the future doctor (Ph.D.) buy a new dress after long persuasions and even a small quarrel. Before her journey to Stockholm, to receive the Noble Prize, Maria, who as her daughter noticed “can’t dress

²¹ E. Curie, op. cit., p. 131.

²² Ibidem, p. 120.

²³ L. Lemire, op. cit., p. 38.

²⁴ E. Curie, op. cit., p. 153.

²⁵ Civil marriage, not church marriage, was the result of Peter’s “non-denominational character and Maria’s (at that time) complete indifference to religion.

²⁶ D. Brian, op. cit., p. 51.

²⁷ Women started shortening length of their dresses and skirts only during the First World War on the inspiration of Coco Chanel. J. Bojańczyk, *Coco Chanel. Pracująca Dziewczyna*, “Wysokie Obcasy”, November 22, 2006.

and doesn't have taste," bought a nice but modest gown that it (the gown) could only arouse "scornful looks of the ladies present". During official meetings, the scientist looked with interest at expensive jewellery other women had and calculated how many new laboratories could be built.²⁸ Peter's premature death left its mark on Maria's psyche and appearance. Unnatural paleness of her face was sharply contrasted with her black cotton "gowns." But in 1910 people from Maria's circle noticed a clear change in her appearance. Black and grey dresses were exchanged for white ones with flowers.²⁹ This change was caused by her affair with P. Langevin, an eminent mathematician, who, since 1910, was in separation with his wife Jeanne. After "Langevin's scandal" which fell into the category of human stupidity, Maria returned to black.³⁰

It should be mentioned that improvement in her material situation never changed her attitude towards her appearance: "[...] she doesn't look at prices but her nervous hands infallibly show the most modest coat, the cheapest hat: she likes only those."³¹ She likes to spend money only on flowers and stones: on cottages;³² "Even Ewa »tyrannizes« her making her stop wearing black dresses before they are already worn out (although Maria at that moment started to like them). So the discussions concerning clothes are strictly academic and platonic, although they don't lack humor. Oh my dear, what horrible heels! No, you will never convince me that women are born to walk on such stilts. And what is this new fashion of low-cut at the back? At the front it looked so-so, but square kilometers of naked backs – no... First, it looks indecent, secondly you can get pneumonia and finally it is ugly! This third reason should, at least, move you, as I reckon! Besides, I like this dress. Only: why are you so often dressed in black? It's too early for you."³³

²⁸ E. Curie, op. cit., p. 396.

²⁹ B. Goldsmith, op. cit., pp. 153–155.

³⁰ L. Lemire, op. cit., p. 97.

³¹ E. Curie, op. cit., p. 238.

³² „Stones” here probably means minerals; later, when her financial situation improved, she bought two cottages.

³³ E. Curie, op. cit., p. 404.

Maria was not influenced by those biting remarks of her colleagues – professors. Maria tolerated, with cheerful calmness, George Urbain's statements concerning the simplicity and lack of coquetry in her dress.³⁴

LOVE AND MARRIAGE

Education was the aim of life of adolescent Maria. Friendly meetings with peers were important for her but less exciting than mathematics, history, literature or foreign languages. Maria wanted to be a teacher and, in private life, a wife and mother.

When she became a teacher and started working as a governess with a landed family of the Żórawskis, miss Skłodowska preferred spending time alone to taking part in parties organized by her employers and their friends. “[...] I have already been backbitten that, a week after arrival, I refused to go to the ball [...] Of course I didn't worry [...]”³⁵ There is no doubts that it was a shocking behavior for poorly educated local gentry.

Maria met her first love rather late. When she was twenty years old she fell in love (and her love was reciprocated) with Mr. and Mrs. Żórawski's son Kazimierz. But according to young man parents' she was not a proper candidate for their daughter-in-law because “[...] you shouldn't marry a governess, even with a gentry background. And who has no money at all!”³⁶ So, good upbringing and education supported by the knowledge of foreign languages lost with the lack of a proper, high dowry. Devastated Maria expressed her despair in a letter written to her friend Kazimiera Przyborowska in 1889 – “...I have no further plans, or, in other words, they are too simple and banal to speak about. Teaching, as long as I can and if I can't do it longer I will dump the world – it's no use crying over spilt milk. These are my only plans at the moment but some people naively say that after all I must go through this kind of fever called falling in love. I have no intention to experience it; if I had different intentions in the past,

³⁴ Ibidem, p. 264.

³⁵ Ibidem, pp. 77–79.

³⁶ L. Lemire, op. cit., p. 22.

they had already gone up in a smoke, they had been buried, sealed and forgotten, because, as you know a wall is always stronger than a head which wants to go through...”³⁷

The fact that the Żórawskis did not accept Maria as their future daughter-in-law made Maria leave Poland and go to study in France; at the same time she crossed off marriage and love from her life plans. Discouraged and mistrustful towards men, Miss Skłodowska avoided any romantic involvement, convicted (on the basis of one example) that poor girls could not count on tenderness and dedication.³⁸ For this reason, during her studies at Sorbonne, she spent the time mainly in the company of men with whom she could only talk on scientific subjects. According to Denis Brian, the author of the book “The Curie’s Family” at that period a circle of Maria’s friends and admirers consisted mainly of “grinds” and almost exclusively of Poles. It should be stressed that Lamotte – who was French and was one of Maria’s friend – hoped to have an affair with her. But Maria damped his ardour explaining that after her B.Sc. degree she was going to come back to Poland and take teaching.³⁹ It should be noticed that the acquaintance with Professors: Paul Painlevé, Jean Perrin and Carl Maurain turned into a deep and long lasting friendship.⁴⁰ According to Ewa Curie during the “Sorbonne” period Maria’s feelings were finally directed to mathematics, physics and chemistry. One fact can show how much she was concentrated on learning – one day she, a diligent student, did not notice 30 thousand soldiers suppressing, under her window, riots caused by people who were opposed prohibition of striptease in the nearest night club.

Maria Skłodowska met Peter Curie in Józef Kowalewski’s⁴¹ flat in Paris. The reason of arranging the acquaintance of future husband and wife was prosaic. Miss Skłodowska, employed by Towarzystwo Popierania Przemysłu Krajowego (the Society of Supporting Native Industry) was urgently look-

³⁷ F. Giround, op. cit., s. 30.

³⁸ E. Curie, op.cit., p. 133.

³⁹ D. Brian, op. cit., p. 43.

⁴⁰ E. Curie, op. cit., p. 124.

⁴¹ Piotr Kowalewski was a Professor of Physics at the University of Freiburg in Germany.

ing for a space where she could study magnetic properties of various sorts of steel. According to J. Kowalewski a young scientist – Peter Curie, could help this ambitious student from Poland. Maria impressed her future husband very much.⁴² 35 year old Peter was ready to marry her almost the moment they met. Courting her for the first time, he, as he said later, acted without any hesitation, convinced that he met the woman of his life. Maria needed 10 month to decide if she wants to make their relationship legal. Only after the defence of his doctoral dissertation did they marry. According to their daughter, Ewa, he won her heart with “persuasion, kindness and irresistible charm.”⁴³ Contrary to the etiquette of those times Maria used to meet Peter in her rented room. It should be stressed that “official” visits of a man to an unmarried woman were treated as “immoral.”⁴⁴

The marriage of Mr. and Mrs. Curie lasted only eleven years. Peter was not only a husband, friend and father of her daughters but first of all, a partner in scientific work. Peter supported his wife in her research and never diminished her achievements.⁴⁵ According to laboratory technicians who once asked doctor Curie to solve a complicated mathematical problem he, without embarrassment, said that Maria was better. Because the problem was too difficult for him he suggested that they should wait for his wife.

According to Ewa Curie two simple words show the mutual love and the deepest sense of their marriage – “I work with my wife” which Peter wrote five days before his death.⁴⁶ At that moment, when she decided to make their marriage legal, apart from her work in laboratory she had other duties connected with the household. The Curies, who at the beginning lived only on Peter’s salary could not employ a servant. “A budget of 500 francs per month is too small to pay for a servant so you need to sweep the house, make the beds and cook (now a real !) dinner and take care of husband’s clothes. So Maria gets up at dawn to go to the market before leaving to laboratory and in the evenings, on her way back with her hus-

⁴² E. Curie, op. cit., pp. 135–138.

⁴³ Ibidem, p. 152.

⁴⁴ D. Brian, op. cit., p. 46.

⁴⁵ L. Lemire, op. cit., p. 24.

⁴⁶ E. Curie, op. cit., p. 269.

band she does the shopping: at a merchant, at the dairy. Early in the morning she peels vegetables, prepares meat for afternoon meal. Those times when light-hearted Miss Skłodowska doesn't know how to cook chicken soup have already gone! It is a matter of honor for Mrs. Curie to know about cooking..."⁴⁷ Their financial situation fundamentally improved after they received the Noble prize in 1903. Since then, Maria's life became easier because all things connected with keeping the house were done by servants.⁴⁸

Despite financial difficulties and exhausting work in the laboratory Maria stated that she was a very happy wife. She described the period of her marriage with Peter as filled with hard work and "the best years" of her life. She thought that her husband was an extraordinary man who was granted a brilliant mind and who was very modest and kind. "He fulfilled everything and even more what I could dream about at the beginning of our relationship – Maria wrote later. My admiration for his extraordinary values, so rare and noble that sometimes he seemed to me almost the only person in the world completely deprived of vanity and meanness that I could find in myself and in others, judging them indulgently, but at the same time aspiring to better ideal, continually was increasing."⁴⁹

Peter's death was a tremendous blow for Maria.⁵⁰ His premature death completely changed Maria's character. Having realized that Peter was really dead, she almost completely isolated herself from the world. Almost two weeks after his death she started writing a diary, unilateral painful conversation with her deceased husband in which she showed her great resentment towards awful fate. "My Peter, life without you is cruel, this is an anxiety that can't be expressed, endless despair, unlimited sadness."⁵¹ "[...] we were for each other. Our relationship must have been written in

⁴⁷ Ibidem, p. 162.

⁴⁸ Ibidem, pp. 241–244.

⁴⁹ Ibidem, p. 270.

⁵⁰ M. Skłodowska-Curie, *Piotr Curie*, trans. H. Szalay-Szyllerowa, Warsaw 1953.

⁵¹ 7th May, Skłodowska-Curie, Maria: „Since you ceased to exist”. Maria Skłodowska-Curie's journal written after her husband's death in the years 1906–1907, trans. S. Zagórski. See: http://kobieta.gazeta.pl/wysokie_obcasy/2029020,53662,292977.html.

the stars. Only that it should have lasted longer.”⁵² She decided to move house to be able to visit her husband’s grave more often. During her father-in-law’s funeral – dr. Eugen Curie – she asked gravediggers to take out Peter’s coffin and put it on the top. In this way she wanted that in future her corpse would be directly over her husband’s corpse. Her daughter Ewa writes that till the end of her life she was “incurably lonely,forlorn person.”⁵³

MATERNITY

Maria was a mother of two daughters. The elder one, Irena, was born in 1897, the younger one, Ewa, seven years later in 1904.⁵⁴ Several months before the second child was born Maria had a miscarriage. According to her it was the result of great overwork which resulted in nervousness and even a slight somnambulism. “I’ve trusted my organism, and now I deeply regret it because I had to pay a high price. A child – a daughter was alive. And I have wanted her so much!”⁵⁵

In the year of Irena’s birth, Maria started her doctoral dissertation. Although she wanted this child, she was irritated by her bad feeling which disturbed her in her work. “For over two months I have had a feeling of nausea the whole day from the morning till the evening. I am tired and weak. Although I don’t look bad at all I feel unable to do any job and I feel bad at spirit...”⁵⁶. Despite many inconveniences, in the eighth month of her pregnancy, she set off on a dangerous bike trip around Bretagne. She assured her husband that she did not feel tired. This exhausting escapade was stopped by approaching birth which she underwent without any groan and with her teeth clenched.⁵⁷ On the day of Irena’s birth she wrote in

⁵² 1th May, Skłodowska-Curie, Maria: „Since...

⁵³ E. Curie, op. cit., p. 270.

⁵⁴ H. Skłodowska-Szalay, *From Memoris of Maria Skłodowska-Curie*, Warszawa 1958.

⁵⁵ E. Curie, op. cit., p. 218.

⁵⁶ Ibidem, p. 166.

⁵⁷ Ibidem, p. 168.

a book of expenses: “Champagne – 3 franks, telegrams – 1.10 franks and in a column pharmacy and doctor’s help – 71.50 franks.”⁵⁸

Maria did not even consider quitting her work to bring up her daughter. She decided to combine duties of wife, mother, housewife, cook, doctoral student and experimental physicist. Peter supported Maria’s decision. He stated that he had “wife created to share with him all the duties.”⁵⁹ Just three months after the birth, Maria presented the results of her studies over magnetism of quenched steel. But excess of duties made the Curies employ a nanny for Irena. In spite of providing Irena a constant care, Maria was irrationally afraid that something wrong might happen to her. In those moments the young mother gave up her work and ran to check what was going on with the infant.⁶⁰ With child’s birth, Maria started writing, despite the results of her research and everyday expenses, the most important events in her daughter’s life: her weight, kind of meal and sulks concerning them, dates of cutting her first teeth etc.⁶¹ A week after the announcement of the discovery of polonium Mrs. Curie wrote that “Irena makes »bye-bye« – she crawls on all four quite well and says »gogli-gogli-go«. All day long she stays in the garden in Sceaux, on a carpet. She rolls on it, stands up and sits down...” But the important discovery that there is a second radioactive element in uranium tar was preceded by a note that her daughter has cut the 15th tooth.⁶² According to her biographers, Maria was a hard-faced person and at the same time a caring mother.⁶³ If she did not have an urgent work in the laboratory, she designed and sewed dresses for small Irena. In the evenings she often came to crying Irena and stayed with her until she fell asleep. Maria’s behavior towards small Irena annoyed Peter. The man, who in reality was not, as Maria described him in her

⁵⁸ Ibidem, p. 74.

⁵⁹ M. Skłodowska-Curie, *Autobiography*, Warszawa 1960, p. 31.

⁶⁰ Ibidem, p. 170.

⁶¹ E. Cotton, *The Curie’s Family and radioactivity*, trans. S. Dłuska, Warszawa 1965, p. 41.

⁶² E. Curie, op. cit., p. 185.

⁶³ Compare: Maria Skłodowska-Curie, *Korespondencja Marii Skłodowskiej-Curie z córką Ireną, 1905–1934. Wybór*, trans. K. Dolatowska, Warszawa 1978.

autobiography the gift of heaven,” often reproached that “You only take care of a child!”⁶⁴

The birth of blue-eyed and dark hair Ewa gave Maria energy. A year before she defended her doctoral dissertation and received the Noble Prize in physics.⁶⁵ This time “...she can’t breast-feed her daughter but she, with great care, looks after her; she writes down details of her development, her first movements, history of her first teeth Such small creatures always move her and her nervous state improves; child’s smile lights up her face with a smile too. She returns to her work with new strength and with great pleasure she approaches her apparatuses in laboratory...”⁶⁶ Maria never neglected her daughters although it was their grandfather and a servant that mainly looked after them.⁶⁷ Even during the greatest period of overwork, she always found time to check personally if they were all right, not dirty, well dressed and combed if they slept well and what they ate. In her free time she sewed and repaired their clothes. After Peter’s death, Maria was responsible for their upbringing, she had earned for their living and was also responsible for the continuation of scientific researches and professor’s duties.⁶⁸ “I wish to bring up my children as best as I can but even they can’t revive life in me. My daughters are 9 and 2 years old. They are good, nice and quite pretty. I want them to be fit and sound The elder is talented and intelligent, the younger seems very clever. Taking her age into consideration. 20 years are needed to bring them up to be decent persons – I doubt I will be able to live so long because I have had a very tiring life and constant distress isn’t good for health and vital forces. It can’t be helped. What will be, will be – as long as I can I have to carry this burden.”⁶⁹

Maria brought up her children according to her own pedagogical conception. It was based on the rule that each day for an hour the girls were doing specific handicrafts or problems developing their mind. After finishing compulsory duties, regardless of the weather, the girls spent their

⁶⁴ E. Curie, op. cit., p. 200.

⁶⁵ Compare: M. Skłodowska-Curie, *Autobiography...*, pp. 42–43.

⁶⁶ E. Curie, op. cit., p. 257.

⁶⁷ E. Cotton, op. cit., pp. 75–77.

⁶⁸ E. Curie, op. cit., p. 293.

⁶⁹ *Ibidem*, p. 295.

time outdoors. Next to their house or in a gymnasium the girls did physical exercises developing their strength and agility. Their mother taught them to work in a garden, model, sew and cook. During the holidays, the girls were swimming, riding horses and bicycles, wandered in the mountains. Maria wanted her daughters to be brave and not afraid of darkness, storm, illnesses or bandits. In spite of the fact that she consciously brought them up as French she took care to teach them Polish and she made them know the country of her descent.⁷⁰ Maria left her daughters free hand as far as religion was concerned (that is why she has never baptized her children) or their future profession. Through her liberal attitude she justified widely understood tolerance. Maria, in a very innovative way, tried to educate her own daughters.⁷¹ When Irena graduated from elementary school Mrs. Curie persuaded her colleagues from Sorbonne to form a kind of cooperative where scientists themselves, would be teaching their children using the most modern didactic methods. According to her idea, which was implemented for two years, every day ten girls and boys, including Irena Curie, were taught only one lesson under the direction of the greatest scientists of Sorbonne. This “experimental” school had to stop its activity because the parents were overworked and the children had to prepare for school-leaving examinations.⁷²

Maria was glad that her daughters had better material conditions than she did at her childhood and youth. But she did not want riches for them. A few times she consciously resigned from assuring them a great fortune. After Peter’s death, against opinion of members of her closest family, she decided to give her laboratory a gram of uranium which was worth, at that time, a million franks in gold. According to her, poverty was very uncomfortable. But she described wealth as unnecessary and offending. She thought that her daughters would have to earn their living themselves.⁷³ But there was lack of a subject: good manners in Maria’s educational curriculum. So the girls could not smile at somebody’s beck and call, entertain guests, pay visits, do courteous gestures. This lack of good manners resulted

⁷⁰ B. Goldsmith, *op. cit.*, pp. 136–138; E. Curie, *op. cit.*, p. 299.

⁷¹ E. Curie, *op. cit.*, p. 299.

⁷² E. Cotton, *op. cit.*, pp. 78–79.

⁷³ E. Curie, *op. cit.*, pp. 299–300.

in the future, for example, Irena after having arrived in laboratory did not say “good morning” and once during a meal in the company of other scientists she threw a slice of bitten bread with behind her.⁷⁴

“Did Maria’s efforts to give her daughters free development of individuality, from the earliest years of their childhood appear functional and effective? Yes and no. The period of learning in this experimental school gave Irena this kind of mental culture that she wouldn’t acquire in any other secondary school but it caused some gaps in her knowledge. As far as psychological influence is concerned..... I doubt whether through our contact with mother we have become better. I don’t think that you can really and thoroughly change child’s character with the help of such or other educational methods. However, she managed to instill some feature in us forever: love for work (thousand times stronger at my sister than me!) – some indifference towards material matters and feeling of independence which makes us undoubtedly believe that always and in every situation we will be able to get by. (...) I didn’t have a happy childhood. Maria completely won only in one field: we both owe her health, agility, fitness and passion for sports.”⁷⁵

During the last days of her life, Maria had a very high fever so she often lost consciousness. When she regained it, she loudly made some calculations and measurements but she did not call the names of her daughters.⁷⁶

⁷⁴ L. Lemire, op. cit., p. 129.

⁷⁵ E. Curie, op. cit., pp. 303–304.

⁷⁶ Ibidem, pp. 434–435.