Maria Curie-Skłodowska's Hierarchy of Values
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“We are working here and I do hope we will be useful for something”. (Maria Curie-Skłodowska, Correspondence with the daughter Irene)¹

Abstract
This paper examines Maria Curie-Skłodowska's philosophy of life and aims to identify and reconstruct her hierarchy of values. The study also focuses on how the scientist’s ‘private’ theory of values influenced her life and scientific work, and therefore, led to her success—namely, to be the first woman in history receiving the Nobel Prize (in Physics in 1903 and in Chemistry in 1911). The essay is based on Maria Curie-Skłodowska's thoughts and beliefs expressed in her writing (including letters and autobiographical notes). Special attention is paid to her attitude to traditional moral questions and philosophical issues concerning women’s involvement in social life.

Introduction
In this essay I would like to examine the impact of the world view of Maria Curie-Skłodowska (1867–1934) on her life and professional achievements. I would like to answer the question of how an anonymous woman from Central-Eastern Europe has achieved so much at the beginning of the twentieth century—at a time when the world was generally not friendly towards women, not even on a declarative level, especially to their education and professional aspirations. Moreover, this woman was born in a country that was not present then on the world map, and where the education of young Poles faced insurmountable barriers (since Polish was banned as a language of instruction at schools).

Therefore, I ask why Maria Curie-Skłodowska, who was married (widowed since 1911) and had two daughters:
- was the first woman in history to receive the Nobel Prize (1903),
- was the first and only woman to be awarded two Nobel Prizes, and the only one that received them in different fields (in Physics–1903 and in Chemistry–1911),
- was the first woman in history to become a professor at the Sorbonne (1911),
- cofounded (as one of two women) and then (since 1923) was a deputy chairman of the first international commission on intellectual cooperation (Comission Internationale de la Cooperation Intelectuelle)?

Certainly the reasons for Maria Curie-Skłodowska’s success were her natural abilities, character and hard work. However, she was not the only talented, persevering and industrious woman at that time. The sine qua non of her success was something more than that. She was able

to succeed due to her world view, expressed in an individual hierarchy of values and implemented in life. Without this hierarchy Curie-Sklodowska would have achieved no more than other intellectually gifted women at that time, for whom the peak of professional performance was a teaching post at girls’ school. Only a combination of natural talents, character and a particular world view laid the foundations for Maria Curie’s academic and personal success.

Aiming at the identification and analysis of Maria Curie-Sklodowska’s hierarchy of values, my research is based on her letters and autobiography, from which a clear and simple system of values emerges. For Maria Curie the most cherished values were: firstly, professional work (particularly scientific work); secondly, social utility of work and science; and, finally, science and education.

‘Work’ is a key word to Marie Curie’s writings, which is repeated and referred to again and again. Its meaning describes the most important value in Maria Curie’s life. In Autobiographical Notes she writes: “first of all in our [Pierre and Maria’s] life was our scientific work”\(^2\). But for her work it would have been her life. Working was always more important for her than any other responsibilities. She writes about her dilemmas after giving birth to her first daughter: “It became a serious problem how to take care of our little Irene and of our home without giving up my scientific work. Such a renunciation would have been very painful to me”\(^3\).

Even when she was unable to work as a scholar during the war, and when her daughters missed her and feared the German invasion of France, she was still working. She trained medical staff in radiology and arranged a radiology war front service. If no one else could do that, Maria Curie x-rayed wounded people at the front by herself, arriving at field hospitals with a van containing radiology equipment.

In the analyzed value system the second most important position is occupied by utility, which is understood by Maria Curie as altruism, social usefulness, and contribution to the progress of society. Usability is also an universal desire to maximize common profit and—in this way—people's happiness. For Maria Curie this utility is both the chief purpose of life and moral commitment: “You cannot hope to build a better world without improving individuals. To that end each of us must work for his own improvement, and at the same time share a general responsibility for all humanity, our particular duty being to aid those to whom we think we can be most useful”\(^4\).

In Maria Curie’s set of beliefs acquisition of knowledge and the use of science are subordinated to usefulness. This is demonstrated by Maria Curie-Sklodowska’s attitude during the war. In her autobiography she writes about the choice of the tasks, when each of the Sorbonne professors had to individually decide how to use their skills during the war: “

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\(^3\) Ibid., p.179.

\(^4\) Ibid., p. 168.
therefore sought to discover the most efficient way to do useful work, turning my scientific knowledge to most profit”.  

Maria Curie understands science not only as the object of her work and a means of social progress and—in this way—as a means of common profit. She understands science mainly as a key opening up new intellectual vistas for scientists. She writes about her student days in Paris: “All that I saw and learned that was new delighted me. It was like a new world opened to me, the world of science, which I was at last permitted to know in all liberty”.

Maria Curie believes that the primary and only purpose of the scientist’s job is the practice of scientific activity itself. She has never cared about honors, awards and advancement on the academic ladder. When awarded the title of a professor at the Sorbonne, she was genuinely surprised. She writes about this in her memoirs: “I had not expected a gift of this kind; I never had any other ambition than to be able to work freely for science”.

The system of values adopted by Maria Curie had certain consequences in her life. Recognition of the primacy of work against any other obligations caused inevitable conflict between work and household duties: “But of course the care of my children's education was only a part of my duties, my professional occupations taking most of my time. I have been frequently questioned, especially by women, how I could reconcile family life with a scientific career. Well, it has not been easy; it required a great deal of decision and of self-sacrifice”. Maria Curie subordinated domestic responsibilities to scientific duties, which does not mean that the former were not fulfilled. Interestingly, placing scientific work as the most important value in life ultimately did not affect the quality of her relationships with daughters or the home atmosphere negatively: “the family bond has been preserved between me and my now grown-up daughters, and life is made brighter by the mutual affection and understanding in our home, where I could not suffer a harsh word or selfish behavior”.

Maria Curie, however, sought support and the meaning of life neither at home nor in her family. She found the sense of life in her professional work, particularly in studies and research. She drew vital courage, a sense of meaning, self-confidence, and ultimate satisfaction and happiness from work. In a letter addressed to her brother she also writes: “If I did not love to work I could sometimes lose my courage”. In a letter to her sister she also argues: “this effort is not everything that can be demanded from us, miserable people, but it is the only thing that can bring us a little contentment”.

There are numerous consequences in Maria Curie’s life resulting from the recognition of usefulness as a purpose of all activities, in particular, as the aim of pursuing scientific work.

5 Ibid., p. 209.
6 Ibid., p. 171.
7 Ibid., p. 192.
8 Ibid., p. 196.
9 Ibid., p. 196-197.
Firstly, the idea of usefulness results in a kind of ‘anti-hedonism’ in her thought—the rejection of pleasure, not only as a life purpose, but also as a value at all. After receiving the first Nobel Prize, Maria Skłodowska—previously a wife of a scientist—becomes a public figure, known and admired. However, she avoids reporters and companionship because they distract her from work. In one of the letters she writes: “People interrupt us at work as much as they can, now I decided on being brave to refuse any visitors, but they are still bothering me”.

Secondly, for Maria Curie the recognition of the fact that one’s work has to be useful to others leads to the belief that one has to show a commitment to social issues. This idea was not new to Curie’s life, because already during her studies in Warsaw she took part in the activities of “an enthusiastic group of young men and women of Warsaw, who united in a common desire to study, and whose activities were at the same time social and patriotic”; about which she writes: “the nearest purpose was to work at one's own instruction and to provide means of instruction for workmen and peasants”. During her studies in Paris it had not changed: “We all were interested in politics”. Even as a nineteen year old girl, while describing the first impressions of the Polish mansion into which she came as a governess, Maria Curie is surprised by the surrounding young people, for whom the names such “as positivism, Świętochowski, the workers issue are the real ‘bête noire’ of course for those who heard about such words [...]”.

Thirdly, the belief in the power of the social utility of the individual’s actions implies the belief in social progress, which is brought about, among others, by science. This progress, however, is not possible without the abandonment of selfishness and without the pursuit of common profit by all people. Maria Curie writes about her youth: “Yet I still believe that the [utilitarian] ideas which inspired us then, are the only way for real social progress”.

Next, the acknowledgment of the importance of usefulness leads to the obligation of disinterestedness in scientific research. Maria Curie demonstrated this in her actions as she did not expect personal profit from her research. She writes: “My husband, as well as myself, always refused to draw any material profit from our discovery”.

Another consequence of the idea usefulness is Maria Curie’s reluctance to the different varieties of egoism, also to national egoisms. The Polish scientist is certainly a model cosmopolitan. Nevertheless, she does not forget about her national roots and after regaining independence by Poland she commits herself to the reconstruction of an independent Polish state (for instance she organizes the Radium Institute in Warsaw—a radioactivity research institute for young Polish scholars) as best as she could. She also considers herself to be a citizen of France, devoting herself to help the wounded fellow citizens of an adopted country at the fronts of the First World War. Her correspondence with the scholars of many countries, including those

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13 Curie, Autobiographical Notes, p. 167-168.
14 Ibid., p. 172.
16 Curie, Autobiographical Notes, p. 168.
17 Ibid., p. 225.
towards whom she could harbour resentment (e.g., German or Russian), shows that she is a person living above national prejudices. She writes: “Science is, after all, an international phenomenon and any national features were ascribed to it as a result of the lack of understanding of its history”.  

The recognition of utility as a value by Maria Curie implies, finally, her aversion to war and her efforts to preserve and maintain peace among nations. As a result of her experiences during the radiological service at the war front, she writes: “To hate the very idea of war, it ought to be sufficient to see once what I have seen so many times, all through those years: men and boys brought to the advanced ambulance in a mixture of mud and blood, many of them dying. Many of them dying of their injuries, many others recovering but slowly through months of pain and suffering”. Even though she was not engaged in any of the particular political movements, and despite the fact that for an intellectual attitude she deemed most appropriate to be distanced to the current political activity, after the war Maria Curie was involved in the idea of the so-called “moral disarmament”.

One of many implications of holding science and education as the highest values by Maria Curie is the recognition that at an individual level only do they give a scientist a “very precious sense of liberty and independence”. On the other hand, at a more universal level, science and education are very valuable for her too because only through them might the world be better: “You can see, however”—she wrote to Albert Einstein on 6 January 1924—“what we can achieve by education: the doctor must treat the ill despite their nationality”.

The inevitable intellectual consequence, both of her belief in science as the only tool of explaining the world and the recognitions of science as the goal of an intellectualist’s life, is the rejection of the religious faith by Maria Curie. She rejects religion both as an acceptable way of understanding human reality, and as an educated person’s life model. If true happiness and the purpose of life can be guaranteed only via social utility brought by scientific work, it is clear that Maria Curie cannot understand those who find consolation in religious happiness or elation. In a letter addressed to her cousin she writes: “The more happy I regard them [people finding solace in religion] to be, the less do I understand their ideas on those things and the less I am ready to share their happiness”.  

The recognition of the value of science and education also resulted in Maria Curie’s modern views, particularly on the issues of education. She took care to educate her daughters in a modern way: “I wanted very much to assure for my children a rational physical education. Next to

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19 Curie, Autobiographical Notes, p. 216.
20 Ibid., p. 171.
outdoor walks, I attach a great importance to gymnastics and sports”. Maria’s modern world view also manifests itself in her lifestyle. Eve, her younger daughter, writes that in “post-war years [M. Curie and her daughters’ mores] caused scandal and were subjected to criticism from the uninitiated; fifteen years ahead of fashion we discovered the life of water sport lovers, swimming competitions, sunbathing, and camping on deserted islands [...]”.

Modernity in this case means openness to new, unpopular or even socially unacceptable ideas and views.

The most important ideological inspirations for Maria Curie’s views are certainly: Warsaw positivism (especially Alexander Świętochowski’s ideas about work); eudaimonistic utilitarianism (in particular John Stuart Mill’s general philosophy of usefulness) and positivistic scientism (within Auguste Comte’s Positive Philosophy). All these ideas are associated with nonconformism—a protest of a small group of Europeans against the ideological paradigm in force at that time, as well as the anticipation of the postmodern world paradigm shift.

Alexander Świętochowski, one of the most important ideologists of Polish positivism, emphasized the value of work in his writing of the 1870s. Work for him is not only an utilitarian dimension, but it also constitutes human dignity which becomes the foundation of humanistic ethics. Świętochowski wrote: “work is the source of man’s dignity on earth [...] [it] refines, elevates, enriches [him] [...] is his lofty duty [...]”. From those teachings Maria Curie certainly took her cult of work, foreign to the vast majority of her contemporaries, for whom work was just a heavy task.

Maria Curie’s world view was clearly influenced by John Mill’s ideas, which were very popular in Europe (including Poland) in the late nineteenth century. Not only did Mill emphasize the usefulness of work but also the importance of education in general and specifically the education of women in society. Recognition of scientific work, the highest value for Maria Curie, as an individual’s aim in life perfectly corresponds to Mill’s definition of utilitarianism: “The creed which accepts as the foundation of morals, Utility, or the Greatest Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness”. The philosopher drew the practical consequences from this: “According to the Greatest Happiness Principle, as explained above, the ultimate end, with reference to and for the sake of which all other things are desirable (whether we are considering our own good or that of other people), is an existence exempted as far as possible from pain, and as rich as possible in enjoyments, both in point of quantity and quality [...]”. This, being, according to the utilitarian opinion, the end of human action, is necessarily also the standard of morality; which may accordingly be defined, the rules and precepts for human conduct, by the observance of which an existence such as has been described might be, to the

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23 Curie, Autobiographical Notes, p. 196
24 Ewa Curie, Biografia Marii Curie, quoted in Korespondencja Marii Skłodowskiej-Curie z córką Ireną, [transl. A. K.], p. 118.
26 Mill, Utylitarianism, ch.2 (http://www.gutenberg.org/files/11224/11224-h/11224-h.htm#CHAPTER_II; access: 9.03.2012).
greatest extent possible, secured to all mankind; and not to them only, but, so far as the nature of things admits, to the whole sentient creation”. 27

Positivism, the ideas of which have shaped the youth of Maria Curie and influenced her entire adult life—is the first epoch in human history worshipping science as the most valuable human activity. Science, according to positivists, examines facts, it discovers an objective (not illusionary) reality, and thus best serves the people. On the basis of experimental science Auguste Comte formulated his philosophy of ‘positive’. W. Tatarkiewicz writes that “he [Comte] wanted to express the fact that, firstly, it [Comte’s philosophy] deals only with real objects, shunning the imaginary, explores things available to the mind and not mysteries; that, secondly, it considers only the useful topics, avoiding idling, because it wants to serve the improvement of life and not satisfy idle curiosity; that, thirdly, it is limited to items of which certain knowledge can be achieved, shunning the topics unstable and leading to eternal dispute; that, fourthly, it deals with issues relating to science, avoiding vague topics; that, fifthly, it works positively but it cannot be limited to negative criticism”. 28 Certainly, Maria Curie would fully agree with all those ideas.

If to try to characterize Maria Curie’s value system, one of its essential features must be pointed out. Due to the attitude to axiological tradition, it is anti-traditional world view opposing a conservative value system. Her anti-traditionalist outlook is mainly based on the understanding of professional work as an ultimate goal in life. The modernity of this view is also expressed in the recognition that the value of professional responsibilities does not depend on gender. Maria Curie’s ideas clearly show a feminist trait. However, it should be remembered that at the time feminism in this sense had not yet been explicitly formulated. Any emancipatory ideas from the second half of the nineteenth century, containing demands for equality of women in terms of the access to work, were not in the modern sense of the term feminist ideas because they did not accept that professional work could ever be a woman's aim in life.

According to the traditional ideologies at that time the woman was still perceived as a mother performing household chores. Barbara Welter, describing the model of femininity in the mid-nineteenth century in the USA, enumerates the following four values prescribed to women: “piety, purity, submissiveness and domesticity”.. Małgorzata Stawiak-Ososińska entitled her book about femininity in Poland in nineteenth century with three feminine virtues of that time: Nubile, Submissive, Neat. Jadwiga Hoff writes: “Savoir-vivre books […] up to the twentieth century had been promoting basically only one female role model; that is, a happy wife, a good

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27 Ibid., ch.2.
29 “The attributes of True Womanhood, by which a woman judged herself and was judged by her husband, her neighbors, and her society could be divided into four cardinal virtues - piety, purity, submissiveness, and domesticity... Without them..... all was ashes. With them she was promised happiness and power”. Barbara Welter, The Cult of True Womanhood: 1820-1860, http://www.pinzler.com/ushistory/culttwo.html; access: 25.07.2011.
and exemplary mother, an unemployed housewife and a goddess of the hearth and home [...]. The authors of classical savoir-vivre books did not even consider the fact that women from the upper or even the middle class would like to have professional work; according to them women were always ‘forced’ to work by some life circumstances’. The background of these assumptions is explained in the following way: “Middleclass women’s professional work was perceived negatively. Social conventions demanded from women to find their fulfillment at home”. Maria Curie’s views and lifestyle show how far she moved away from the above mentioned convention.

It also should be noted that the concept of usability in Maria Curie’s thought is not the same as the usability understood as a traditional feminine virtue. Her utility does not only lack any individual meaning, but it also does not refer to being subsidiary to men and is not expressed in domestic or welfare activities—in the functions of a mother, housekeeper, or nurse, as it was understood by the traditional model of femininity.

Consequently, Maria Curie’s belief in social progress and her sensitivity to social inequality sets her among the representatives of progressive views, opposing any types of conservatism, which accepts the status quo and rejects the belief in social changes. Tradition is understood by conservatives as a foundation of social stability, while from a progressive point of view, for obvious reasons, it is perceived as a hindrance to progress. A famous work written by pope Pius XIX, Syllabus of Errors (1864), which is a manifesto of the most powerful European conservatism—Catholicism, includes descriptions of the most popular ‘heresies’ in nineteenth century, some of them being the views arising from the hierarchy of values represented by Maria Curie:

56. Moral laws do not stand in need of the divine sanction, and it is not at all necessary that human laws should be made conformable to the laws of nature and receive their power of binding from God.
57. The science of philosophical things and morals and also civil laws may and ought to keep aloof from divine and ecclesiastical authority.
58. No other forces are to be recognized except those which reside in matter [...].

Moreover, a close connection between Maria Curie’s ideology and Warsaw positivism, the ideology of the ‘young’ enthusiasts of work, education, progress and emancipation of women, is proof of the rejection of traditional, ideological programs, as described by H. Markiewicz: “Increasingly opposing traditionalism, [...] positivism started to become the ruling

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32 Ibid., p. 246.
33 B. Welter writes: “One of the most important functions of woman as comforter was her role as nurse...[...]. The sickroom called for the exercise of her higher qualities of patience, mercy, and gentleness as well as her housewifely arts. She could thus fulfill her dual feminine function—beauty and usefulness... ”(Welter, The Cult of True Womanhood).
ideology of that time, especially in the Kingdom [of Poland], and it was formulated most thoroughly and studiously in theoretical works and was widely present in literature.” 35

Maria Curie’s cosmopolitanism was inconsistent with the nationalistic ideas, popular in Poland after the regaining of independence. Although at the beginning of the twentieth century a new ideology of ‘internationalism’ was introduced, it was only a part of propaganda of the Soviet state, which in practice pursued a policy directed against many nations. In France Maria Curie was considered by the right wing as a Jew, in Poland she was respected and admired, but she also aroused controversy in the same environments because she did not follow the nationality model promoted by Polish nationalists.

Maria Curie’s pacifism is also anti-traditional in its nature. Not only is it new as an ideology of the time, but also it refers to the modernity in two ways—in understanding social profit of individuals’ actions as a criterion to evaluate those actions and in the recognition that each and every individual’s life is valued more than any collective political and religious goal.

Finally, Maria Curie’s rationalism, leading to ontological naturalism, is a modern concept, not connected in any way to platonic or scholastic tradition of the idea. According to the positivist postulates, modern rationalism is a scientistic ideology rather than a philosophical movement. This kind of rationalism rejects any metaphysical cognition or metaphysical explanations of reality. It recognizes science as the only tool which can be used to explain and describe the world. Consequently, the scientific outlook on life is a source of Maria Curie’s atheism and the reason why she rejected religion not only as a life goal but also as a moral foundation of life. The ideology, which Maria Curie had announced prior to Bertrand Russell, is now referred to as a modern ‘New Atheism’. The above-presented outline of the Polish scientist’s beliefs may undoubtedly be described by the following quotation about atheists in general expressed by one of the best known representatives of ‘the New Atheism’, Richard Dawkins: “to be an atheist is a realistic aspiration, and a brave and splendid one. You can be an atheist who is happy, balanced, moral and intellectually fulfilled”. 36

Conclusion

According to this research it seems that three were there most important values in Maria Curie-Sklodowska’s life: work, usefulness and science / education. The first two are understood by her in a non-traditional sense, especially when applied to women: work as a professional, scientific job, and usefulness as a contribution to the society. It implicates the nature of Maria Curie-Sklodowska’s hierarchy of values: feminism, progressivism and naturalism.

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