

Madame Curie Study Guide

Madame Curie by Ève Curie

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Summary

Madame Curie: A Biography details the struggles and triumphs of one of the most famous scientists in the world. Marie's daughter Eve, the younger of the Curies' two children, wrote the biography clearly in reverence to her physicist mother. An artist and musician, Eve recreates moments from her mother's life in lyrically written scenes transposed with Marie's letters and journal entries, painting a vivid picture of the world-renowned physicist's personal and professional life.

Marie Curie is born Marya Sklodovski in 1867 to Polish parents in Warsaw. She grows up under a Russian regime that forbids her to speak her native Polish language. Her mother dies of tuberculosis when Marya is 11 years old. The loss of her mother and eldest sister devastates her, but her father remains to cultivate an environment of intellectualism that continues to influence her throughout her life. Marya, called Manya by her family, receives a gold medal, the highest grade she could achieve in high school, but her scientific career does not begin until she is 24 years old. Manya works as a governess until her sister completes medical school, at which point she moves to Paris to attend the University of France at Sorbonne. There, she registers as Marie Sklodovski.

Marie works tirelessly to achieve a master's degree in physics and a second master's degree in mathematics. While working on her doctor's thesis, she meets Pierre Curie, and the two physicists take to each other. Marie resists love at first because she had been stung too deeply by a failed romance in Poland. Eventually, Pierre wins her over with his brilliance and a surprising wellspring of poetic sensibility. They marry in 1895 and their first daughter Irene is born in 1897. Early on, the keys to domestic life elude them. They keep little furniture for fear of housework taking too much time away from their work. Marie and Pierre are happiest in the laboratory or out traveling through the countryside on their bicycles, and they hardly leave each other's side.

Pierre stands beside Marie as she changes the world through scientific revelation. While working on her doctorate in a small glassed-in studio of the University of France, Marie discovers two new elements -- polonium and radium. Marie and Pierre work past the point of exhaustion to prove their discovery and to care for their young daughter. Radium provides the means for X-Rays, photography, and cancer treatment, so soon an industry springs up around the substance.

The world repays the Curies for their work in acclaim and honors that the couple does not want. Shortly before celebrating the birth of their second daughter, Marie and Pierre receive the Nobel Prize in Physics for their work with radium. However, the couple shuns the fame the prizes bring them, and they refuse to patent radium, preferring a laboratory in which they could continue their work. That coveted laboratory eventually becomes the Institute of Radium in Paris, but Pierre does not live to see it. He dies in 1906 in an accident while crossing the street.



Pierre's death leaves Marie devastated. Described as timid and reserved by her daughter, Marie Curie is not one to weep openly in public. Marie plays the part of the stoic intellectual, raising her daughters while, at the same time, continuing her work on radium. According to her daughter, at no point does Marie feel the need to sacrifice her career in order to have a family. Far from feeling neglected, Marie's daughters revere their mother as much as the public reveres this towering example of female intellectual brilliance.

During World War I, Marie donates and organizes mobile X-Ray units to assist wounded soldiers. She creates an Institute of Radium in Warsaw to aid the Polish scientists who had inspired her. Crowds of adoring fans meet her when she tours America, and her daughters revere her until the end of her days. At the time of her death, Marie was a teacher, mother and scientist. Today the world remembers her as the first woman to receive a Nobel Prize.

The original edition of *Madame Curie: A Biography* was published in 1937, three years after Marie Curie's death. The 2001 edition includes an introduction by Natalie Angier, who hails Curie as a pioneer of women's liberation and a powerful force in science. Marie Curie sacrifices herself on many levels for the sake of science, as illustrated by her death, but she also sacrifices her time, her comfort, and her privacy in the pursuit of science.



Part One: I Manya and II Dark Days

Summary

Following an introduction by Natalie Angier and Eve Curie, the book opens in 1872 in Warsaw, Poland. The Sklodovski children play in the Gymnasium where their father is a professor and under-inspector of the school. Zosia is the eldest, followed by Bronya, Hela, Jozio, and Manya. Manya, or Marya Sklodovski, is the pale, timid girl who grows up to be the famous Marie Curie.

Manya was born November 7, 1867, and her childhood is far from idyllic. Her father is an impoverished nobleman and her mother suffers from tuberculosis. Her mother's illness keeps Manya from knowing the comfort of her mother's kisses, as her mother did not want to spread the contagion. Manya also lives in Russian-occupied Poland, so she is not free to do something as basic as speak her native language. When her mother and elder sister Zosia die within a few years of each other, it turns Manya away from her family's Catholic faith and into more secular thinking. She cherishes reading and uses it as a way to escape her troubles.

Analysis

In their introductions, both Natalie Angier and Eve Curie applaud Marie Curie for opening up new frontiers for women in science. They insist that, while the long-suffering pioneer figure of Marie Curie may be romanticized, it is largely accurate.

Eve Curie begins exploring the long suffering of her mother beginning in her mother's early childhood. Before she develops a love of science, Marya Sklodovski holds a deep love for her family. The author suggests that the expression of that love is stunted after her mother refuses to kiss her thanks to the communicable tuberculosis. Marya does not know her mother is ill until the disease claims her, so she does not understand these "rites" of isolation. Her mother's behavior is indicative of a silent stoicism that seems to be a trait passed down from generation to generation. Still, her family is not without affection, as displayed in the many affectionate nicknames given to the siblings. One such nickname is Manya, the name that Eve Curie uses in reference to her mother throughout the Part One of the biography.

Intellectualism is also a trait seemingly passed down to Manya from her parents. Living quite literally in the gymnasium, or high school, where her father teaches physics, Manya grows up in an environment that values intellectual ability regardless of gender. This is vital to Manya's progression to one of most celebrated physicists of all time. This trait of intellectualism is further enhanced when the death of Manya's mother and sister turns her away from spiritual concerns. Because she is no longer concerned with God, young Manya turns to more secular methods of finding truth.



Vocabulary

munitions, diminutives, agglomeration, insurrection, judicious, conjugal, hassock, timidity, stupefied, doleful, irrepressible, speculative, virtuoso, anecdote, convalescent, consumptive, enliven, provision, delirium, apparatus



Part One: III Adolescence and IV Vocations

Summary

At the age of fifteen, Manya finishes her schooling at the gymnasium with one year left to go. Her best friend is Kazia, a cheerful Polish girl. They attend a school that houses Poles, Russians and Germans alike. The politics of the day threaten the peace of Manya's teenage years. At one point, she and Kazia help comfort a fellow schoolmate whose brother is about to be hanged for taking part in an assassination plot. Still, Manya graduates with a "gold medal" or highest marks in the gymnasium. Her father grants her a year off from school before she decides her future vocation, and Manya spends time in the country being idle "for the first and last time in her life". She attends a kulig, or ball, and writes to her friend Kazia about how she danced the last dance at eight-o'clock in the morning.

After her vacation, Manya returns to Warsaw to her father's home. There, she and her sister Bronya become tutors in order to earn money for their university schooling. M. Sklodovski is poor, but he instills in his children a love for intellectual pursuits. Manya must attend classes at a "Floating University", or secret classes held by Polish patriots under the watchful eye of the Russian occupiers. The state-run universities are closed to women and many Polish educators are not allowed to teach the culture Polish science. Manya decides that, should they toil separately, neither she nor Bronya will ever achieve their intellectual goals; so, Manya gives her income to her sister, so she can study medicine in France. When Bronya graduates, she promises Manya she will help pay her way through school.

Analysis

This brief period of Manya's development pits the excitement of adolescence against the tension of an occupied people. On the one hand, Manya is carefree for the first and perhaps only time in her life; on the other, the oppressive Russian rule introduces adult problems into the teenager's world. The Floating University is an example of these adult problems, as Manya must pursue her education by clandestine means. Were she discovered, the penalties would be severe, but she forges ahead in any case. Her exuberance enhances her determination to learn, but she is not without at least a little youthful folly.

When she suggests that Bronya first attend the University in Paris, this is reflective of her tendency for self-sacrifice. It is a theme that repeats throughout her life, especially in regards to her family. On several occasions, Manya puts the needs of her siblings, children, and the world ahead of her own.

Vocabulary

incontestably, copious, impertinence, intransigence, inadvertence, omission, farandole, recompense, exaltation, respite, traversing, economized, vestibule



Part One: V Governess, VI The Long Wait, and VII The Escape

Summary

Manya takes on work as a governess to support her father and sister. Her employers, Monsignor and Madame Z., have a large estate one hundred miles outside of Warsaw in Szczuki. It is a thankless job that leaves Manya exhausted and depressed, particularly after she is denied marriage to the Z.'s eldest son, Casimir Z. Casimir's parents refuse to allow their son to wed a girl who is obliged to work in "other people's houses". Manya writes to her sister that she has no plans to fall in love.

In 1888, Manya's father accepts a better paying post as head of a reform school, which allows him and Bronya to put more money aside for Manya's schooling. Bronya is engaged to a different man named Casimir and she is almost ready to take her final examinations. At long last, the family can afford to send Manya to Paris. Despite the previous bargain, Manya resists out of consideration for her father and younger siblings. After she works in a laboratory at The Museum of Industry and Agriculture, a secret enclave of Polish scientists hiding from Russian rule, Manya gives in to her academic dreams.

Analysis

Manya's work as a governess is not difficult in terms of physical labor, but throughout this period of her life, she describes her work as drudgery. Increasingly it darkens her mood, especially displayed in her letters to her family. There is a modicum of intellectual work involved in her position -- she teaches the Z.'s children. Still, the position of a governess is obviously not intellectually stimulating enough to satisfy a young Manya.

The suggestion that she is the type of girl to work in "other people's houses" is reflective of how the Z.'s view her class. The Z.'s are wealthy landowners and consider working people beneath them. Because of this class issue, Manya is thankfully saved from a marriage to a man who would not appreciate her intellectual talents, but she does not see it as a blessing at the time. Being denied this love inspires Manya to reject love altogether -- a common reaction among wronged women, according to Eve, and one that lasts only until she meets Pierre Curie.

Despite being miserable in the Z.'s household, Manya does not immediately take her sister's offer to move to Paris. Manya hesitates because she has told her father she will live with him, and her brother and other sister have educational needs that must be funded as well. Again, this is representative of Manya's self-sacrificing impulses, and the only thing that supersedes this impulse is the drive for scientific discovery. In the secret laboratory of The Museum of Agriculture and Industry, she is reminded of her passion



for physics and chemistry, and the longing for a university education in France is too much for her to resist.

Vocabulary

pettily, demoralized, indulgence, endurance, provincial, imperious, incessant, exemplary, ardor, consoles, balked, defrauded, despondency encompassed, baccalaureate, sentimental, apprehension, insurmountable, idyll, draughts, hypocrisy, laments, dissimulate, gaiety, embellishments, lucrative, arduous, amiability, scruple, extricate, torpor, parsimonious, threadbare



Part Two: VIII Paris and IX Forty Rubles a Month

Summary

Manya registers at the French university Sorbonne as "Marie Sklodovski" and dives into her coursework. Her education at the less-structured Floating University in Warsaw has left some gaps in her learning, but her classmates and instructors are more than welcoming of foreign born students such as herself. Manya, now Marie, works tirelessly in order to achieve the title of Master of Science. She has little room for diversion.

Soon, Marie moves out of her sister's house so as to be less of a financial burden, and pays for her own room in the Latin Quarter of Paris. There, she lives a life of "monastic simplicity," (105) industrious and fanatic, often foregoing such necessities as meals and heating coal. She works so tirelessly that she obtains one Master's degree in physics and one in mathematics, even as her father expects her to come back to Warsaw. At least the Alexandrovitch Scholarship helps ease her financial troubles, six hundred rubles that she promptly pays back as soon as she has income. Despite frantic pace of her four years at Sorbonne, Eve suspects that her mother "never ceased to prefer these hard, fervent days to all others." (116). Marie even writes poetry in tribute to these early college days.

Analysis

Here, Manya becomes Marie, a transformation that follows her for the rest of her life. Marie is simply the French version of Marya, her true Polish name, so this is done less out of an urge to deny her past and more of an impulse to live fully in the present. The University of France at Sorbonne is more rigorous and structured than her secret classes at the Floating University in Warsaw, so she begins somewhat behind her fellow students. Her work ethic and fanatical hunger for knowledge more than make up for those gaps.

Marie's tendency to ignore her own health and safety for the sake of science also becomes clear during this time. Out of prideful independence, she leaves her sister's home and moves into a rented room. There, she struggles on forty rubles a month with barely enough left over to pay for heating and meals. She forgets to eat and barely notices the cold thanks to her all-consuming passion for knowledge. She even abandons her promise to move back to Warsaw and live with her father for the sake of a second master's degree.

Marie succeeds because of her intelligence, her drive, and the fact that she is largely supported in her pursuits. There is never any mention of ethnic or gender discrimination



at the libertine French university; in fact, she is welcomed by the students and faculty. This atmosphere of acceptance contributes to her future accomplishments.

Vocabulary

amassed, anonymity, austere, enviable, coveted, stingily, refuge, incarnate, agitation, exorbitant, prosaic, omnibus, despoiled, acclimatization, ingenuity, disdained, minute, audacity, cordial, indispensable, torrid, compatriot, soliciting, uniformity, thesis, providential, buoy



Part Two: X Pierre Curie and XI A Young Couple

Summary

Marie's plans to avoid love are ruined when she meets Pierre Curie. The French physicist has already established himself as a respected scientist, following an "anti-natural" path that puts him at odds with most women -- but Marie is not most women. Her dedication to science wins him over, and he pursues her with poetic flair, even going so far as to attempt to learn Polish. They are married on July 26, 1895.

Their first days together are spent bicycling through the countryside, a habit that is to follow them throughout their live together. They set up a small house in Paris that is sparsely furnished, save for their books and papers, so Marie needs to spend hardly any time keeping it maintained. Pierre teaches at the School of Physics for five hundred francs a month, their only income, while Marie studies for her fellowship and researches magnetization in the school laboratory. She gives birth to their first child, Irene, on September 12, 1897. At no point does she feel she needs to choose between having a child and continuing her career as a scientist; she works to do both.

Analysis

The "anti-natural" path is mentioned several times in the biography; this is a phrase coined by Pierre in order to describe a life that is not lived according to custom. It reflects an academic outlook that values science over many day-to-day necessities and domestic rites. For instance, "normal" women would not interest Pierre, but a woman like Marie, fanatically driven towards academic endeavors, fits his worldview perfectly. This usage of words also reflects Pierre's poetic nature as displayed in his surprisingly sentimental and lyrical letters to Marie.

Their early domestic life together is awkward because the "natural" way of going about love and marriage eludes them. For example, they do not bother to buy furniture for fear it will impinge on their laboratory time. Marie only learns how to cook so she does not embarrass herself in front of his mother-in-law, and she goes about it in a very methodical, scientific fashion. She and Pierre are true intellectuals, rejecting most of what society demands of them in the interest of pure science, and Eve asserts how perfectly suited they are for each other.

Eve also asserts that by continuing her career in science while having children, Marie is not necessarily neglecting one or the other. Marie throws herself fully into every task she undertakes. Eve continues to present letters from Marie to family as evidence of Marie's dedication to her loved ones.



Vocabulary

renounce, timidity, estranges, cumbersome, drudgery, candidature, efficacious, impetuous, renounce, platonic, dissertations, entreaties, alloy, aspiration, perplexities, obdurate, luminous, picturesque, itineraries, transcendent, garret, treatises, puerile, annotated, prodigal, interval, sanatorium



Part Two: XII The Discovery of Radium and XIII Four Years in a Shed

Summary

Marie is fascinated by Henri Becquerel's discovery that uranium spontaneously emits energy or radiation. She makes this radiation the subject of her doctor's thesis and gets permission to work in a glassed-in studio storeroom in the School of Physics. There, despite poor conditions, Marie meticulously tests the radioactive properties of all known chemical elements. She uses those results to isolate two previously unknown elements -- polonium and radium.

In order to prove these elements exist -- because up to that point, they have not been seen in their pure state -- Marie struggles to determine the atomic weight of polonium and radium. Pierre comes to her aid, and the School of Medicine allows them to work in a dilapidated shed previously used for the dissection of corpses. It is a place hardly suitable for genius, with a leaking roof, no floor, and stray blackboard "that landed there for no known reason" (167). The goal is to refine pure polonium and radium from an ore called pitchblend, and this takes them four years. In 1902, Marie accomplishes the goal, identifying radium's atomic weight as 225. The radium glows a phosphorescent blue.

Analysis

Eve Curie breaks down the complicated path toward discovering radium in a way that makes it accessible to the layperson. Here, Eve employs the intelligence she inherited from her mother as much as the poetic sense it seems she inherited from her father.

Eve also emphasizes the shed in which Marie and Pierre toiled. Far from glamorous, the shed helps display the Curie's pure dedication to science. It is the work that is paramount, not the condition of their working space. Also, it makes sense that two people who are so comfortable working many hours in such a shed would be profoundly uncomfortable with the wealth and fame of their later years. A decent laboratory is all they desire, but they are industrious and hardy enough to make do with the most run-down conditions.

Vocabulary

furnish, unfrequented, inexplicable, precedent, nonplussed, unplumbed, hitherto, sublime, malefactor, enumerated, appropriated, cadavers, bitumen, dilapidated, noxious, smelting, gangue, bourgeois, laconic, effaced, paltry, obstinacy, reproach, supplication, tenements



Part Two: XIV A Hard Life and XV A Doctor's Thesis -- and Five Minutes' Talk

Summary

Life becomes difficult for the Curies after their ground-breaking discovery. Pierre struggles to obtain a professorship that might come with a laboratory in which the couple can continue their work. With no lab in sight, Marie gains a position teaching at a college called the Higher Normal School for Girls near Sevres. This increases their income and their workload. They hardly rest, save for bicycling holidays in the summer.

The Curies publish numerous "scientific communications" on the nature of radium, pointing to its many uses, from aiding in photography to conducting electricity and treating cancer. A lucrative industry springs up around Marie's discovery. The University of Paris awards Marie her doctorate in June of 1903, soon after which Marie refuses to capitalize on her discovery by taking out a patent, saying "It would be contrary to the scientific spirit."

Analysis

The Curies' propensity for overwork becomes clear in this chapter; managing research, family life, and their professional careers is no easy task. The work exhausts the couple, but they both protest that they rest now and then. Their rest is in the form of long country road trips on their bicycles, which is hardly putting their feet up. Even in their leisure activities, Marie and Pierre are adventurous and hard-working. Marie's father dies in 1899 while she is away on one of these trips.

The products of their hard work include the ten-plus scientific publications they make on the discovery of radium, an accomplishment commendable for scientists in any era. When it becomes clear that the Curies can easily profit off of the element Marie discovered, she refuses. Here, Marie acts as the selfless martyr of science, who would truly prefer to sacrifice her time and her health laboring for scientific principle that could benefit humankind. Eve paints her as an embodiment of that scientific spirit, which is the spirit of venturing off into the unknown to explore only for the sake of exploring.

Vocabulary

inroads, subordinate, polytechnic, facetious, cordiality, consecrate, academicians, imprudence, rheumatism, implacable, obstinacy, layman, collaboration, physiological, aristocratic, malignant, inflection, insidious, cataclysm, atrocious



Part Two: XVI The Enemy and XVII Every Day

Summary

For their work, the scientific community bestows honors after honor upon the Curies. In December of 1903, they are jointly awarded the Nobel Prize in Physics with Henri Becquerel, which amounts to about seventy thousand francs. Marie is the first woman to receive the Nobel Prize, but she is disinterested in fame. The honors mean little to her and her husband. The couple continues to toil in the name of science.

Now wealthy and well-known, Marie's life is not without its difficulties. Her tireless work ethic is challenged by her notoriety; now she is finally exhausted. Pierre's rheumatism troubles her, and her second pregnancy puts her in poor health and a dark mood. The birth of her second daughter, Eve, rejuvenates her outlook. The Curies close themselves off from the public as Pierre continues to fruitlessly search for a decent laboratory.

Analysis

The Enemy represented in the title is fame and renown. Neither Marie nor Pierre want the acclaim that is heaped upon them. An appendix is included in the back of the biography, detailing all of Marie Curie's awards and medals, and the list is extensive. By the end of her life, she is the first woman to have won a Nobel Prize and the first scientist, male or female, to win two. This struggle with fame follows Marie for the rest of her life, and at no point does she become comfortable with it. Eve often describes Marie as timid and reserved, suggesting that perhaps it is not only Marie's belief in science for science's sake that keeps her trying to avoid the spotlight.

The spotlight finds her regardless, but despite the money and praise heaped upon Marie, she and her husband still cannot find a laboratory. This speaks of the shallow nature of celebrity, because if her fame were truly useful, Marie could employ it as a means to do better science. This useless public attention throws her into another dark mood in which she finally craves rest. Marie is tireless when it comes to those things that interest her -- physics, mathematics, and chemistry -- but when it comes to less intellectual topics, her patience is short.

Vocabulary

benevolence, illustrious, repercussion, astronomical, solemn, inclement, homage, harbored, judiciously, fervor, unfathomable, chaste, rummaged, dispossessed, consternation, hierarchies, squander, interlocutor, ardor, prostration, interminable,

antics, stoic, conciliatorily, ruches, conspicuous, phosphorescence, palaver,
paradoxical, harrowing, precarious, reciprocal



Part Two: XVIII April 19, 1906

Summary

Pierre Curie is killed while walking across the street. A horse-drawn cab fails to see him in the rain, and he is run over, the wheels of the cab crushing his skull. Stunned, Marie faces Pierre's death with silent stoicism as she buries him in his mother's tomb at Sceaux. Sorbonne offers her Pierre's position at the university, the first time such a professorship had been awarded to a woman in France. The day Marie takes over Pierre's classes, she begins his lecture at the exact sentence where he had left off.

Analysis

Eve describes the death of her father, Pierre Curie, in gruesome detail. This emphasizes the horror and shock that the family felt at such a sudden death of their beloved patriarch. Marie's reaction to the death of her constant companion is to retreat further into her own self. She closes off emotionally, refusing to weep in public or even in sight of her intimate family, and she loses no time getting back to science and teaching. This speaks volumes of Marie's intellectual detachment. While not without care for those around her, Marie deals with her feelings by denying they exist. She throws herself into her work.

Vocabulary

fuming, viscous, scrutinized, inanimate, insensible, inert, contracted, atrocious, processions, delegations, eulogies, automaton, morrow, extracts



Part Three: XIX Alone and XX Successes and Ordeals

Summary

Marie's father-in-law assists her with raising her daughters until his death in 1910. She buries him underneath Pierre in the family plot. She continues her work, striving to build the laboratory that Pierre always wanted, while Irene shows promise in mathematics and Eve becomes a talented musician. Marie encourages their intellectual pursuits, teaches them Polish and wastes no time training them in etiquette. Meanwhile, she beings an education collective and continues to teach.

In the public realm, Marie Curie's name drums up controversy as her fame spreads. There are those who adore her and those who malign her for challenging traditional male roles. She ignores both sides. After being honored in a ceremony in the now-independent Poland, Marie's efforts to build a laboratory come to fruition in the Institute of Radium in Paris. The Institute opens in July 1914.

Analysis

Marie continues on without Pierre as diligent as ever. Even such a tragedy cannot keep her from pursuing her work with radium, and now she doubles her efforts to find a laboratory as a way to honor her husband. For some time, Pierre's father helps her by staying with her daughters while she is working. Eve describes her grandfather as a precious ally to Marie, to whom she is devoted. Marie stays by old Dr. Curie's bedside as he succumbs to lung congestion. When he dies, however, she again refuses to admit her grief.

The practice of burying old Dr. Curie underneath his son involves exhuming Pierre's body; she saves room for herself to be placed in the tomb as well. This displays Marie's consideration for family, believing it vital that family members stay together even in death. Her intellectual detachment by no means indicates a lack of love for those around her; it is simply her way.

Vocabulary

inertia, beneficial, droll, successive, jaunts, disporting, barbarous, impetus, undemonstrative, apprised, superfluous, philanthropist, oppose, perfidious, repentance, calumniated, indignation, grandiose, rancor, zenith, pious, evoked



Part Three: XXI War and XXII Peace -- Holidays at Larcouest

Summary

At the onset of World War I, Marie remains in Paris while her daughters are safe in the countryside. Refusing to leave Paris when the Germans threaten invasion, Marie aids the war effort by creating "little Curies," or mobile X-Ray units made from limousines, and often driving the units herself to help wounded French soldiers get faster care. As France calls for gold and silver to be donated, Marie offers up her medals, including the two given to her for Nobel Prize awards, but she is turned down.

After the war, Marie finds peace in the village of Larcouest, an ocean side destination populated by many of her scientific contemporaries. There, the vacationing Sorbonne professors discuss little of physics and mathematics and instead spend their time swimming and sailing. Marie spends much of her time with her daughters. She is almost fifty years old.

Analysis

Marie throws herself into war as wholeheartedly as she throws herself into science, without sentiment or need for recognition. She risks her life for the war effort by often driving her little Curie herself on the way to assist wounded soldiers, and her medals--tokens of her fame and not representative of her science--are objects she easily gives up. This is further evidence of Marie's strength of character and her industriousness when it comes to what she sees as activities of value. At the same time, she ensures that her daughters stay out of Paris, so they are protected and not underfoot.

The war must have taken quite a psychological toll on Marie, because after it comes an uncharacteristic period of idleness, somewhat similar to the year she spent in the country after gymnasium. Larcouest is a retreat that the intellectuals of Sorbonne have discovered and virtually keep to themselves; there, science does not play a part. Here, Marie keeps her daughters by her side, as there are no intellectual pursuits to distract her.

Vocabulary

regiments, contingency, incurring, munitions, fetishism, subordinate, tenacious, eddying, dissimulation, fiendish, tacking, infallible, sonorous, philistines, transparence, brandished, decadent, coquetry



Part Three: XXIII America and XXIV Full Bloom

Summary

In an interview with Mrs. Maloney, an American journalist and admirer of Marie Curie's, Marie reveals that her laboratory cannot afford the element she discovered. The journalist launches a campaign in America called the Marie Curie Radium Fund in hopes buying a gram for the renowned scientist. The fund is successful, and Marie takes her daughters on an extensive and exhausting tour of the United States.

This begins a period of international activism for Curie. She joins the International Committee on Intellectual Co-operation, the only organization to which she lent the support of her name. With the help of Polish-Americans, she establishes another Institute of Radium in Warsaw. Also, the Curie Foundation is created to support the Institute in Paris.

Analysis

At this point in Marie Curie's life, her daughters remain by her side as assistants through a long and grueling tour. She is aging, so her energy is running out, but this also conspires to make her disposition more mild. Her heart softens at the Meloney's attentions--something that is out of character for a woman who commonly rejects attention, especially from the media. Meloney's activism on the part of women in science plays a part in this, as well as her recognition that the commercialization of radium is inherently unjust. The Marie Curie Radium Fund is a way of correcting this injustice by giving the woman who discovered the element enough radium to study.

For the first time in her life, Marie Curie sees the use of public attention. After returning from America, she puts her fame to work in other ways, supporting the League of Nations and donating a laboratory for scientists to use in her native Poland. The recent war results in the liberation of her home country, so Marie takes advantage of the lack of Russian oppression to benefit those people who first began her education. In this, she displays more of that stoic version of affection for those she claims as her own.

Vocabulary

ushered, sumptuous, fete, frolic, taciturn, ovations, vestment, meteoric, inaugurate, effervescent, precipice, vivified, accorded, infidelity, valiant, jubilee, inaugurated, eminent, latitudes



Part Three: XXV On the Ile Saint-Louis and XXVI The Laboratory

Summary

Marie Curie settles in a house on the Ile Saint-Louis with her daughters where she continues to work and teach well into her sixties. Irene, working as Marie's laboratory assistant, finds time to marry Frederic Joliot and have a child. Marie is an undemonstrative but attentive grandmother. Eve continues to live with her mother when Irene moves out of the house. Marie teaches students of every nationality at the Radium Institute and she and Eve sometimes speak of frivolous things such as dresses and love.

At the Institute of Radium, Marie actively plays a role in her students' development, being hailed as "the greatest laboratory director I have ever known" by her friend Jean Perrin. She conducts "laboratory tea" whenever there is cause to celebrate one of her students' successes. They gather in the garden or the library and drink tea out of laboratory glasses, test tubes and similar equipment. Irene's doctorate is hailed by one of these laboratory teas. Marie continues to work despite encroaching blindness.

Analysis

The last chapters of Eve Curie's biography on Marie Curie become increasingly poetic. As Eve grows up, her aging mother becomes a more accessible force in her life, and it seems as though Eve romanticizes this period as much as if not more--than any other. Marie continues to labor in the name of pure science and to provide for her family. She continues to challenge traditional gender roles, as she has throughout her life, by acting as the director of the Institute of Radium. She continues to ignore the complaints of her body, teaching and researching while her eyes begin to fail her. This shows that her dedication to science is truly life-long.

Also, the laboratory teas are indicative of Marie's dedication to people. It is not just cold, intellectual pursuits that have dominated her life. She has spent an inordinate amount of time helping those around her. Her family, her native people and those of her adopted France, and her students of every nationality become an extended network of loved ones. She loves them the best--and most comfortable way--she knows how; through labor and detached affection.

Vocabulary

cherished, damascene, parquet, alluvial, klaxon, laden, tyrannically, incapable, compote, vehemence, progressive, maltreated, divan, esthetics, vestibule,

approximation, compensated, sundry, solicitations, inexorably, crockery, laureate, tremulous, conscientiously, duplicity, lugubriously



Part Three: XXVII The End of the Mission

Summary

Just as she has her entire life, Marie Curie continues to work despite the complaints of her body. She is stricken with illness, first detected in her gall bladder, then in a series of dizzy spells and fever. For some time she has planned to build a villa at Sceaux, but she puts off doing so until it becomes clear she is near the end. Finally bedridden, Marie's doctors suggest a sanatorium in the mountains to help cure what looks like bronchitis, which she never reaches. She succumbs to her illness with Eve at her side. Later, a fellow professor determines that the true cause of death was the thing she discovered -- radium. The biography ends by describing her grave, entombed with Pierre Curie, and the book on radioactivity she so frantically worked on through the last months of her life.

Analysis

At no point does Marie Curie cease to work. The end of her career can only be brought about by her death. Even as she understands her illness was fatal, Marie obsesses over the book that will become her last scientific treatise. Eve's description of Marie's last hours borders on the religious. Her body is portrayed similarly to remains of saints. Marie's martyrdom and clarity of spirit have been pervasive themes throughout the biography. Here, the reader learns less about Marie Curie and more about her daughter, who continues to admire and exalt the woman who was first a scientist and then a mother.

Vocabulary

deterioration, suppurated, despondency, pretext, regime, bestowed, perplexed, dissimulate, refractory, docility, efficacy, perish, lucid, pernicious



Important People

Madame Curie

The world-renowned scientist Marie Curie grows up as Marya "Manya" Sklodovski in Poland. She obtains her master's degree in physics and mathematics from the University of France before marrying Pierre Curie. With Pierre, Marie discovers two new elements, polonium and radium. For this discovery, she receives a doctorate, countless medals and honors, a Nobel Prize in physics and a Nobel Prize in chemistry. She is the first woman to be awarded a Nobel and the first scientist, male or female, to be awarded two. Devoted to her family, her native and adoptive countries, and her students, Marie Curie shuns fame for the intellectual pursuits that enriched the world.

Pierre Curie

Marie Sklodovksi marries the acclaimed physicist Pierre Curie in France, 1895, and the two lead a life of scientific discovery together. Marie's constant companion, Pierre is awarded, but turns down, many positions at prestigious universities because they do not come with a laboratory in which to do research. After Marie discovers radium, he helps her study its properties and publish numerous scientific articles. He dies in 1906 after being run over by a horse-drawn cab.

Irene Curie

Irene Curie, Marie and Pierre's first daughter grows up to be an intellectual giant in her own right. During Marie's last years, Irene acts as a laboratory assistant to Marie and obtains a doctorate before marrying Frederic Joliot. She gives birth to Helene, Marie's granddaughter.

Eve Curie

The author of "Madam Curie: A Biography", Eve Curie is the younger daughter of Marie and Pierre Curie. Talented in music and the poetic arts, somewhat like her father, Eve worships her mother and her mother's legacy as displayed by the narrative of her book.

Bronislava "Bronya" Sklodovski/Dluski

Marie Curie's second eldest sister, Bronya, finishes medical school in France shortly after Marie arrives to start her education. Bronya marries Casimir Dluski.



Sophie "Zosia" Sklodovski

Marie Curie's eldest sister, nicknamed Zosia, dies of typhoid in 1876. Her death contributed to Marie's rejection of Catholicism and acceptance of secularism.

Helen "Hela" Sklodovski

Hela is Marie's third eldest sister.

Joseph "Jozio" Sklodovski

Jozio is Marie's only brother.

M. Vladislav Sklodovski

Marie's father, M. Vladislav Sklodovski, supports his children in their intellectual pursuits all throughout their lives, regardless of gender or social standing. He dies in 1899.

Mme Sklodovska

Marie's mother, Mme Sklodovska, is stricken with tuberculosis at a young age. She shows her affection for her children through nicknames since she was unable to touch or kiss her children for fear of communicating her disease. She dies in 1878 when Marie is 11 years old.

Dr. Eugene Curie

Marie's father-in-law, Eugene Curie, helps Marie raise Irene and Eve after the death of Pierre. Eve refers to him as "old Dr. Curie."

Kazia

Kazia is a cheerful Polish girl with whom Marie attends high school in Warsaw. They remain friends for many years, communicating by letter.

Mrs. Maloney

Mrs. Maloney is an American journalist fascinated with Marie Curie. She helps organize the Marie Curie Radium Fund to buy Marie's laboratory a gram of radium.



Jean Perrin

Present during the last years of her life, Jean Perrin is a friend of Marie Curie.

Casimir Dluski

Bronya marries a man by the name of Casimir Dluski at the same time Marie is rejected for marriage by another man named Casimir.

Casimir Z.

The son of M. and Mme. Z., Casimir Z. wishes to marry Marie during her time as a governess, but his parents will not allow it.

M. and Mme Z.

Wealthy landowners, M. and Mme Z.'s full names were withheld by Eve Curie. They employ Marie as a governess during her youth.

Frederic Joliot

Irene's husband, Frederic, is also a scientist in his own right and assists Irene with her research.

Helene Joliot

Helene Joliot is the daughter of Irene Curie and the granddaughter of Marie Curie.

Henri Becquerel

Henri Becquerel is the physicist who first observes radioactivity. He shares the 1903 Nobel Prize with the Curies.

Natalie Angier

A science reporter for the New York Times, Natalie Angier wrote an introduction to the 2001 edition of "Madame Curie: A Biography".



Objects/Places

Warsaw

Warsaw is the capital of Poland, where Marie Curie lives as a young girl and teenager named Marya "Manya" Sklodovski.

Gymnasium

The high school Marie attends in Warsaw is referred to as the gymnasium. Marie receives the gold medal or highest grade.

Kulig

A Kulig is a party or ball for young Polish people. Marie writes to Kazia about dancing all night during one.

Floating University

The Floating University is a system of underground classes for Polish patriots under Russian rule. Instructors meet with their students secretly in various locations around Warsaw, hence the "floating" aspect of the university. The subjects taught are forbidden by the establishment.

Paris

Marie moves to Paris after completing her employment as a governess. At the time, France holds more libertine values than Poland so, as a woman, she is allowed to attend the University of France at Sorbonne.

Sorbonne

Sorbonne is the location of the University of France's main campus where Marie studies.

Polonium

Marie Curie names the first element she discovers polonium after her native country Poland.



Radium

Marie Curie names the second element she discovers radium for its radiant properties. Radium is tremendously useful and can be employed in the treatment of cancer. Quickly, the public recognizes radium as profitable. An industry springs up around it, partially in thanks to the Curies' refusal to file a patent. It becomes extremely expensive, and the woman who discovered it cannot afford to purchase a gram. An American reporter named Mrs. Maloney helps organize a fund to buy Marie Curie one gram of radium.

The Shed

The University of France's School of Medicine allows the Curies the use of an old, run-down shed in order to purify polonium and radium. Previously, the building was used for dissecting cadavers.

Pitchblend

Marie Curie studies the ore called pitchblend during her early experiments with radioactivity; in it she found evidence of new elements. Her four years' of work in the shed are focused on purifying polonium and radium using pitchblend.

The Nobel Prize

One of the most famous awards given to scientists of note, the Nobel Prize, was awarded to Marie Curie for her work with radium and radioactivity. Her first Nobel Prize in physics she shares with her husband and Henri Becquerel; the second she receives for chemistry alone.

Sceaux

Sceaux is Pierre Curie's family home in France where the Curies often vacation. Marie Curie and her husband are buried there in the Curie tomb.

The Institute of Radium in Paris

Marie Curie struggles for several years to build a laboratory that Pierre would be proud of. The Institute of Radium in Paris is the result of that struggle. There, Marie Curie works for the bulk of her life, researching and nurturing new generations of scientists.



The Institute of Radium in Warsaw

A gift to her homeland after WWI, the Institute of Radium in Warsaw is donated to the people of Poland, and a laboratory Marie Curie can work in while away from Paris.

The Museum of Industry and Agriculture

Given a false name, the Museum of Industry and Agriculture is a secret enclave of Polish scientists working to educate the youth despite the Russian establishment's prohibitions.

Alexandrovich Scholarship

The Alexandrovich Scholarship is a six hundred rubles scholarship that helps Marie Curie continue her education at Sorbonne. She repays the money as soon as she gets her first job.

Larcouest

Larcouest is small, ocean side village in France where the professors at Sorbonne go to relax, swim and sail.

Marie Curie Radium Fund

The Marie Curie Radium Fund is organized by Mrs. Maloney, a female American journalist. This fund raises the money to buy Marie Curie's laboratory one gram of radium.

International Committee on Intellectual Co-operation

An organization created by the League of Nations after World War I, the International Committee on Intellectual Co-operation, is the first and only organization Marie Curie joins.

Ile Saint-Louis

The Ile Saint-Louis is the street in Paris on which Marie Curie and her daughters live during her later years.



Laboratory Tea

When a student of Marie Curie's has an event to celebrate, Marie and the staff at the Institute of Radium gather in the gardens and have a "laboratory tea," where they drink tea out of laboratory glasses.



Themes

Industriousness

Industriousness is a major and recurring theme found throughout Eva Curie's biography, "Madame Curie". Throughout her life, Marie Curie works tirelessly in pursuit of science, often at the expense of her health and comfort. The author demonstrates that Curie is able to accomplish her discoveries and make her contributions to the field of science due to her ability to remain focused and dedicated to her work, despite the obstacles. Her husband, too, mirrors this industriousness by standing at her side throughout and contributing as much in the name of scientific discovery. The couple makes a commitment to each other, but also to their work and to their exploration of their ideas. Curie's work with radium is paramount in her life, equal only to her dedication to her family, and she fills her time working in the laboratory, producing scientific treatises and teaching future scientists up until the very last days before her death. This theme connects somewhat with the others explored in the work, as the level of work that Curie engages in ends up having some detrimental impacts on her life and her health in the end. The reader is invited to examine whether Curie's industriousness bordered on unhealthy obsession, and to consider whether or not the result of her work is worth the consequences that she suffered.

Self-Sacrifice

Self-sacrifice is a theme found consistently throughout Eva Curie's biography, "Madame Curie". On several counts, Marie Curie embodies the martyred heroine spoken of in the introductions of her biography. She seems to have been a woman for whom self-sacrifice came easily and naturally, and for which the author is suggesting that she should be admired. From the beginning of her life as a young woman until the end of her life, caused by her dedication and aforementioned industriousness, the writer portrays Curie as a noble and generous person who is willing to sacrifice her own self-comfort, security, and eventually even her health in order to help others. For example, Curie offers to sacrifice her own wages so that her sister Bronya can begin medical school, providing her sister with an opportunity that she would most likely have not had otherwise. Then, she nearly gives up her chance at an education for the sake of her father. When she is able to later in her life and career, she gives an Institute of Radium to her native Poland. Then, in arguably one of the most significant acts of self-sacrifice, she foregoes the potential income from radium so that the world may benefit from its usefulness. The only thing Marie does not sacrifice in the name of her loved ones is her work, but she spends countless hours tending to the needs of both. Eventually, Marie Curie sacrifices her very life for her work, as it is discovered after her death that the radium that so fascinated her also led to her death.



The Scientific Spirit

The theme of scientific spirit can be found throughout Eva Curie's biography, "Madam Curie". In discussing Curie's decision to give radium to the world without seeking recompense for her efforts, the author invites the reader to consider the idea of the merit of the scientific spirit. Marie Curie believes her entire life in the value of pure science, or the pursuit of science without any immediate commercial applications. She is a pioneer who ventures out into scientific realms, rather than geographical, for the sheer sake of discovery. She is not interested in the commercial value of her discoveries, but instead is interested in the search for knowledge for its own sake and for the joy of satisfying the scientist's own curiosity about how the world works. This is why she does not patent radium. Despite the fact that she could make more discoveries with a well-equipped laboratory, Marie rejects her chance to profit off her work. To do so would be contrary to her ideals as a scientist, and it would diminish the value of her work in her own eyes. The author, writing in a time when so much scientific discovery is funded in competitive, profit-driven environments, uses Curie's refusal to patent her discovery as a way to demonstrate the scientist's noble spirit. This helps characterize Curie and supports the portrait that the author paints of the scientist as a self-sacrificing individual of the noblest intentions.

Styles

Structure

The biography is divided into three parts that reflect three stages of Marie Curie's life; her youth and childhood in Poland, her university education and marriage to Pierre Curie in France, and her later years as she continued to raise her daughters and work at the Institute of Radium in Paris. Each of the three parts of the biography is divided into chapters that narrow focus on Marie Curie's life. For instance, Chapter XII is concerned with Marie's experiments with radiation that led her to discover polonium and radium.

The narrator, Eve Curie, presents scenes that represent anecdotes she heard from her mother and family; Eve states in her introduction these anecdotes are without ornamentation or embellishment. Also, several chapters include letters written by the world renowned scientist and Marie's family members. These represent primary sources of historical information around which the biography is built.

Perspective

Tone



Quotes

Manya could not imagine what these fascinating trinkets were. One day, straining on the tips of her toes, she was contemplating them with bliss when her father simply told her their name: 'Phy-sics app-a-ra-tus.

Do you know, Kazia, in spite of everything, I like school. Perhaps you will make fun of me, but nevertheless I must tell you that I like it, and even that I love it.

Unfortunately, neither Asnyk or Brandes could point out a means of obtaining higher education for them in a city where the university was closed to women; nor could those authors supply a magic formula for getting rich quick on lessons at half a ruble an hour.

But those who have the taste for sacrifice within them cannot stop at half-immolations." "I take the sun, and I throw it.

By such words and others more tender, by the protection he offered her and by the deep, irresistible charm of his daily presence, Pierre Curie gradually made a human being out of the young hermit.

The idea of choosing between family life and the scientific career did not even cross Marie's mind. She was resolved to face love, maternity and science all three, and to cheat none of them.

Death is quicker than public officials to claim great men.

I do not feel the slightest need to be decorated, but that I am in greatest need of a laboratory.

In science we must be interested in things, not in persons.

In appearance Mme Curie was a reserved and undemonstrative grandmother, but she wasted a great deal of time and made long detours in order to spend a few minutes with this baby...

What I want for women and young girls is a simple family life and some work that will interest them.

I don't know whether I could live without the laboratory.



Topics for Discussion

Topic for Discussion 1

How does young Marie Curie, or Marya Sklodovski, feel towards her mother? Is she close to her mother? How does her mother's death affect Marya/Manya?

Topic for Discussion 2

Why is Manya forced to speak Russian? Why are there inspectors at her school who make sure she does not speak Polish? What is it about the Polish language that they feel is bad?

Topic for Discussion 3

Why does Manya refuse to go to Paris the first time her sister Bronya suggests it? What was the bargain Bronya and Manya made when they were younger?

Topic for Discussion 4

Why does Manya/Marie have to begin her education at the Floating University in Warsaw? What about the University of France in Paris different than the Floating University?

Topic for Discussion 5

What makes Pierre interested in marrying Marie Sklodovski? What does anti-natural mean to Pierre according to his journals and letters? Do Pierre and Marie lead an anti-natural life?

Topic for Discussion 6

What is it about a laboratory that is so important to Marie and Pierre? Does it have anything to do with the shed they worked for four years in?

Topic for Discussion 7

What does Marie do when Word War I is about to break out in Paris? Why does she ask other famous people for their limousines and motor cars?



Topic for Discussion 8

How does Marie respond to fame and winning the Nobel Prize? What does Marie do in America?

Topic for Discussion 9

How long does Marie work at the Institute of Radium in Paris after it is built? Does she ever retire? What do her students at the Institute think of her? What do her daughters think of her?