The Scientist in Nathaniel Hawthorne's "The Birthmark" and "Rappaccini's Daughter"

A Research Paper Written by
Assistant Professor: Saad Kassim Sagher

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I

In many stories and novels of Nathaniel Hawthorne, the scientist plays a very important part in the development of the plot. Curiously, in these stories and novels the scientist turns out to be a villain in the end, for he proves himself to be an evil man whose scientific curiosity usually leads to the destruction of an innocent human being who has a complete trust in him. The scientist is also shown as a man of wide knowledge and great power that enable him not only to control the life of other people but also to attempt to reshape it in accordance with what he thinks true to human life or nature. This interference with human nature results in acute suffering or even a loss of human life on one hand, and, on the other hand, in the wasting away of his own scientific capabilities that might have been more fruitful if employed for more humanitarian purposes. The fatal mistake of Hawthorne's scientist, then, is that he attempts to undertake God's role, an attempt that pushes him to try to change the innate nature of human beings, thinking that he is going to improve them while he is actually leading them to their deaths. Thus, in "Ethan Brand" (1835), "Dr. Heidegger's Experiment" (1840), "The Birthmark" (1843), "Rappaccini's Daughter" (1844), *The Scarlet Letter* (1850), and many others, the scientist, usually a doctor or a physician, is obsessed with an idea, which involves another person who dies as a direct result of the scientist's obsession. This negative presentation of the scientist reflects Hawthorne's suspicion of the scientist as a man of especial and unusual powers that might be used in such a way as to meddle in the human soul or violate the human heart which holds especial sanctity in Hawthorne's code of morality. In this respect, one may refer to Hawthorne's horror, when he heard that his would-be- wife Sophia Peabody had visited a mesmerist to treat a certain illness she was suffering from. This strong reaction came when mesmerism was considered a science at the first half of the 19th century, and many people sought it to heal some internal ailments by the transference of their "magnetic fluid". He told her:

But, belovedest, my spirit is moved to talk with thee to-day about these magnetic miracles, and to beseech thee to take no part in them. I am unwilling that a power should be exercised on thee, of which we know neither the origin nor consequence... Supposing that this power arises from the transfusion of one spirit into another, it seems to me that the sacredness of an individual is violated by it.[1]

It is important to notice, here, that Hawthorne wrote his stories at a time when science was at a turning point in its history, a point where the experimental aspect of modern science was emerging and dominating scientific practice. It was the same time that witnessed the gradual disappearance of the old methods that connected science with magic and witchcraft. That is why science was still not built on solid ground. It was a pseudo-science, rather than real science, to Hawthorne, who could not understand its methods, therefore could not expect good results from it. Hence, it aroused only fear and suspicion in him concerning its validity and effectiveness. As a result, the scientist, in Hawthorne's stories, is usually confused with the sorcerer or magician, a man who sometimes resorts to supernatural methods, whether in the treatment of his patients or in the preparation of medicine and cure.

To understand Hawthorne's presentation of the scientists and his attitude toward them in some details, two short stories are chosen for discussion: "The Birthmark" and "Rappaccini's Daughter". These two stories are selected, not only because they have close bearing on the subject of the study, but also because they are regarded, from the artistic point of view, as two of the best short pieces Hawthorne had ever written.

[1] Samuel James Lubell, "From Wizard to Scientist: Changing Views Toward Scientists from Hawthorne to Twain", *The WSFA Journal (September/ October 2000)*: 7.

II

In "The Birthmark", Hawthorne presents a scientist whose name is Aylmer, a man who "had devoted himself...too unreservedly to scientific studies".[2]

After spending all his life in his laboratory with chemical substances and herbs, he listens, one day, to the calls of the heart and gets married with a young, beautiful woman called Georgiana. Yet, his new marriage cannot take him a way from his life-long love of science. His love of science is so deep-rooted inside him that no second love can weaken it. This fact shows itself most clearly immediately after marriage in his reaction to a birthmark on one of his wife's cheeks. The scientist, inside Aylmer, the "loving" husband, is provoked and saddened to see that birthmark, which he deems an ugly defect in his wife's almost perfect beauty. He, as a scientist, has always sought perfection, but now he finds the closest person to him imperfect, therefore, whenever his eyes fall on his wife, he feels gloomy, a feeling which gradually grows into an obsession with the mark. This causes much horror and annoyance to him and to his wife as well. His imagination has exaggerated the ugliness of the mark to the extent that he starts to see it as a symbol, not only of his wife's imperfection, but also of her fallibility and liability to sin (p. 1123). Hence, he develops a strong aversion to it, and in spite of the inherent danger, he is determined on lifting it off through a surgical operation. It is significant to notice here that his view of the birthmark as an ugly spot that spoils his wife's beauty may reveal that his real motive for marrying Georgiana is not his love for that girl, but rather his love for scientific study. Marriage will provide him with a better opportunity to study the birthmark as a pathological case and persuade his wife to accept the operation. In this respect, one has to say that the birthmark may not be actually ugly; it seems so only in his eyes, but

[2] Nathaniel Hawthorne, "The Birthmark", in Norman Holmes Pearson, ed., *The Complete novels and Selected Tales by Nathaniel Hawthorne(* New York: Modern Library, 1965), p.1021. Henceforward, all quotations from Hawthorne's stories will be taken from this edition, therefore only page number(s) will be cited within the text.

not necessarily in the eyes of others. As his wife tells him once some young men have already shown admiration for that mark, while others have found it an emblem of her angelic nature and heavenly beauty. Thus, when he refers to the mark for the first time, she innocently tells him: "To tell you the truth, it has been so often called a charm, and I was simple enough to imagine it might be so"(p. 1024).

Later on, the narrator says:

> Georgiana's lovers were wont to say, that some fairy, at her birth-hour, had laid her tiny hand upon the infant's cheek, and left this impress there, in token of the magic endowments that were to give her such sway over all hearts. Many a desperate swain would have risked life for the privilege of pressing his lips to the mysterious hand. (p. 1024)

But for Aylmer, the scientist, the case is different: The birthmark is an unbearable defect that must be removed by all means. Obviously, Aylmer sees the birthmark as a challenge to his scientific capability. It shows itself to him as a new opportunity to test his knowledge and skills through something very difficult and worth experimenting. Hence, it teases him, defies his proficiency, and pushes him to think of and work hard on making an effective cure that would wipe it out. He is not so sure of success, in spite of his over-confidence in his scientific knowledge, for he feels that a good result is not guaranteed , and there is a high risk for his wife's life. Yet, he is resolved on going on with his scheme, It is common to say that Aylmer, here, is not that loving husband who is really concerned about the safety of his wife's life and who is driven by a pure feeling of love for her as a woman who shares him his life, but rather a cold and even cruel scientist whose main concern is to tread a new path of knowledge that presents itself to him for the first time. Thus, he appears as a Faustian figure that is driven by a strong desire to heap

more knowledge and experience on what he has already had. His wife is significant to him only as an object of experiment, therefore, he is more concerned about the success of the experiment than about her safety as a human being.

On the opposite side, Georgiana, who takes her husband's curiosity about the birthmark lightly at the beginning, finds herself soon in a very difficult situation that leaves her no alternative but to accept his viewpoint about the mark and surrender to his overriding desire of rooting it out. Every look, every gesture, and every remark made by her husband make her feel that her birthmark is an evil that should be eliminated. We are told that:

> He found this one defect grow more and more intolerable, with every moment of their united lives. With the morning twilight, Aylmer opened his eyes upon his wife's face, and recognized the symbol of her imperfection, and when they sat together at the evening hearth, his eyes wandered stealthily to her cheek... Georgiana learned to shudder at his gaze. It needed but a glance, with the peculiar expression that his face often wore, to change the roses of her cheek into a death-like paleness...(p. 1026)

Georgiana's acceptance of the surgical operation comes as a desperate attempt to save her husband from restlessness and herself from madness.
She tells him of her agreement in a way that reflects her recognition of the coming doom, but with the determination of a person who does not fear any danger. She says:

> Danger is nothing to me; for life- while this hateful mark makes me the object of your horror and disgust- life is a burthen which I would fling down with joy... Remove this little mark... for the sake of your own peace, and to save your poor wife from madness. (p. 1026)

On the day of the operation, Aylmer brings his wife to the laboratory, as a pilgrim may bring a goat to the temple for sacrifice. While she puts herself completely at his disposal, he appears happy, with a smile that reflects his confidence in his scientific capability. He shows her several wonderful things of his creation, and gives her a lot

of details about the scientific successes he has previously achieved. It is clear that, through such means, Aylmer tries to appease his wife's inner worry and assure her that he is really able to wipe her birthmark out without any danger and render her perfect in beauty. But all this apparent confidence cannot hide his inner fear or worry which his wife is soon to discover when she enters stealthily into an adjacent room where he has already resorted to with his assistant, Aminadab. We are told that she finds "He was pale as death, anxious, and absorbed … How different from the sanguine and joyous mien that he had assumed for Georgiana's encouragement". (p. 1028)

Aylmer's mistake whether in his attitude toward the birthmark or in his endangering his wife's life through that difficult operation is shown again more directly through Aminadab's reaction to the birthmark, while Georgiana is lying senselessly on the sofa. He instinctively says to himself "If she were my wife, I'd never part with that birthmark." (p. 1028)

The operation is successful on the technical level, but tragic on the humanitarian one. Aylmer sees the birthmark fade away, something that makes him cry rapturously: "My peerless bride, it is successful! You are perfect!" (p. 1029), but he fails to see that the moment his wife loses her birthmark, she loses her life too. Georgiana dies the moment she becomes perfect, as if Hawthorne wants to say that the human being is imperfect by his or her very existence. To be human is to be imperfect; this is the rule of nature, which must be accepted. Aylmer, according to Hawthorne, fails because he refuses to accept this rule, which is dictated by God. He wants to make his own rules. He wants, then, to vie with God or even play God. Aylmer has great abilities, as a scientist, but he misuses them: Instead of putting his abilities in the service of humanity, he wastes them in running after an obsession with the futile idea of perfection that leads him to break down a sacred bond and destroy human life. The scientific power, according to Hawthorne, is a dangerous evil if it is not used for the welfare of humanity.

III

Like Aylmer of "The Birthmark", Rappaccini, in "Rappaccini's Daughter", is a man who has devoted his life to science and scientific experiments. He is referred to, throughout the story, as a doctor, and he holds a chair in the university. As a part of his specialty in medical science, Rappaccini, unlike Aylmer, has especial interest in botany. He has succeeded, through a long series of experiments, to make a private garden where he helps grow various types of very beautiful flowers and plants that are fatally poisonous. The flowers have very sweet fragrance that attracts the flying and creeping insects, only to kill them at once. The flowers are also dangerous for man to touch barehanded. It is common to say that such flowers can't be but the products of a perverted mind.

Like Aylmer of "The Birthmark", Rappaccini makes an innocent woman the victim of his scientific obsession. He sacrifices his own daughter, Beatrice, for more knowledge and power. He stems from the same idealism of Aylmer, i.e. he finds nature defective and he, as a qualified scientist, has to correct it. He thinks that his daughter, as a woman, is too weak to defend herself against the evils of the world.Therefore, he decides to re-make her by subjecting her to many experiments during which he nourishes her with poison from childhood till youth when she becomes as poisonous as any flower in his fatal garden. He forgets that by so doing he has isolated his fair daughter from the human world where she actually belongs to and sentenced her to a life-long imprisonment in the poisonous garden.

Rappaccini is presented first through the speech of his neighbour, Lisabetta, who depicts him to her new lodger, young Giovanni, a new student in the University of Padua. She describes him as a "famous doctor, who ... has been heard of as far as Naples. It is said he distils these plants into medicines that are as potent as a charm" (p.1043). Immediately afterwards, Rappaccini appears in his garden, dealing cautiously with his fatal plants, which he cannot touch without a glove. It is clear that he has spent all his lifetime in this garden,

studying the various effects of flowers on people and creating new deadly species that attract the eyes by their unnatural gorgeous beauty. In fact, this garden has become his entire world. He finds himself among its poisonous flowers, which become like his children. He tends them, takes care of them, and makes an analogy between them and his own flesh daughter through the bright colours of her clothes and the way she ties her hair.

Rappaccini has the typical appearance of the Hawthornian scientist. We are told that he was "a tall, emaciated, sallow, and sickly middle term of life, with gray hair, a thin gray beard, a face singularly marked with intellect and cultivation, but which could never, even in his more youthful days, have expressed much warmth of heart." (p. 1045) This lack of warm emotion, as a matter of fact, is one of the most significant features that defines Rappiccin's character as a scientist and as a father. For this quality makes of him an unfeeling man who has no internal moral deterrent that may stop his rush toward his scientific goals that can be attained mostly through sacrificing the happiness of other people. He is another Faust-like figure whose sheer love of knowledge and lack of human compassion render his goals futile and harmful.

Beatrice's appearance among the poisonous flowers in the garden, smelling and touching them without gloves, emphasizes her affinity to those plants and shows the garden as her natural environment where she can ramble and breathe freely, fearing no danger. It also highlights the great wrong her father has committed against her in making her the object of his experiments and consequently isolating her from the human world. It is significant to notice, here, that Beatrice becomes very happy to see Giovanni, who throws a bouquet of flowers to her from the window of his room that overlooks the garden. Giovanni's gallant deed arouses her warm emotions for the first time in her life, and it becomes the basis for several meetings between the two that will develop into a pure love on Beatrice's side at least. Evidently, her happiness at seeing Giovanni and her later love of him reveal that her father's poison is limited to her physical frame, whereas her spiritual life remains intact and pure. Thus, she appears

innocent, good-hearted, and sincere, qualities that also intensify our awareness of her father's mistake in making her a victim of his love of science.

The first deep insight into Rappaccini's character as a scientist is given by his rival at the university, Dr. Baglioni. In this shrewd analysis of Rappaccini's character, which comes in response to Giovanni's question, Baglioni says:

> Rappaccini … cares infinitely more for science than for mankind. His patients are interesting to him only as subjects for some new experiment. He would sacrifice human life, his own among the rest, or whatever else was dearest to him, for the sake of adding so much as a grain of mustard-seed to the great heap of his accumulated knowledge. (1047).

Dr. Baglioni's accurate diagnosis of Rappaccini's psychological state whose main symptom is the disrespect of the sanctity of human nature is true, not only to Beatrice's case, but also to Giovanni's. Rappaccini has always noticed that his daughter is in need of a companion of her age. Hence, when he finds her happy with Giovanni whose meetings with Beatrice in the garden add a new excitement and delight to her life, he decides to make some experiments on young Giovanni to secure an eligible mate for her without their knowledge. The warning comes from Dr. Baglioni who has a keen eye on Dr. Rappaccini and his daughter because he is afraid that Rappaccini is preparing his daughter for Baglioni's chair in the university. Thus, he tells the unbelieving Giovanni:

> …This man of science is making a study of you. I know that look of his! It is the same that coldly illuminates his face, as he bends over a bird, a mouse, or a butterfly, which, in pursuance of some experiment, he has killed by the perfume of a flower- a look so deep as nature itself, but without nature's warmth of love. (p. 1051)

Giovanni's feeling toward Beatrice has always been fluctuating. On one hand, he fears her because he has noticed, on several occasions, that there is something unnatural and deadly in her richly perfumed breath which kills some insects that come near her. But, on the other hand, he is fascinated with her because he has always found her good-

hearted, pure, affectionate and guileless. In the words of one critic "Giovanni's infatuation with the 'poisonous' Beatrice is divided between a sense of her noxiousness and a perception of her purity".[3] Now, Dr. Baglioni's warning helps increase Giovanni's fears, especially because the doctor, who is full of determination to foil Rappaccini's experiment on Beatrice, succeeds in exaggerating the danger awaiting Giovanni if he does not give her a certain antidote Baglioni has already prepared for the purpose:

> Her father ... was not restrained by natural affection from offering up his child, in this horrible manner, as the victim of his insane zeal for science... What, then will be your fate? Beyond a doubt, you are selected as the material of some new experiment. Perhaps, the result is to be death- perhaps a fate more awful still. (p. 1051)

Later on, Beatrice explains to the indignant Giovanni her father's character and what he has done to her:

> He is a man fearfully acquainted with the secrets of nature... and, at the hour when I first drew breath, this plant sprang from the soil, the offspring of his science, of his intellect, while I was but his earthly child... I ... grew up and blossomed with the plant, and was nourished with its breath....
> There was an awful doom, ...the effect of my father's fatal love of science- which estranged me from all society of my kind. (p. 1060)

It is significant to refer, here, to Dr. Rappaccini's reaction when he sees his daughter and her companion talking in the garden. He looks at them, not as human beings, but as two of his products. He spreads out his hands, like a God-figure, descending his benediction on his creatures, while they appear as perverted Adam and Eve in a corrupt paradise.[4] His feeling is a mixture of triumph, happiness and pride:

> As he drew near, the pale man of science seemed to gaze with a triumphant expression at the beautiful youth and maiden, as might an artist who should spend his life in achieving a picture or a group of statuary, and finally be satisfied with his success. He paused – his bent form grew erect with conscious

[3] Susan Manning. "Nathaniel Hawthorne: Artist of Puritanism". in Boris Ford. ed., *The New Pelican Guide to English Literature, vol. 9 (London: Penguin Books, 1988), p. 105.*

[4] Richard Fogle, *Hawthorne's Fiction: The Light and the Dark* (Norman: University of Oklahoma Press. 1964). p. 106.

power, he spread out his hand over them, in the attitude of a father imploring a blessing upon his children. (p. 1062)

In this patriarchial position of triumph, Rappaccini is shocked to hear his daughter asking him "wherefore didst thou inflict this miserable doom upon thy child?" His answer shows complete negligence of his daughter's suffering, as it also exposes his arrogance and depraved mind:

"Miserable?", exclaimed Rappaccini, "What mean thou, foolish girl? Dost thou deem it misery to be endowed with marvellous gifts against which no power nor strength could avail an enemy? Misery, to be able to quell the mightiest with a breath? Misery, to be as terrible as thou art beautiful? Wouldst thou, then, have preferred the condition of a weak woman, exposed to all evil, and capable of none?" (p. 1064)

Beatrice's answer, while dying as a result of drinking Baglioni's antidote, is very significant, though simple: "I would fain have been loved, not feared". This answer shows Hawthorne's belief in the power of love as a means of social integration and human happiness. Love, compassion, acceptance of human frailties and imperfection, and sympathy with the weak and sufferer, these are the true remedies to human ailments, not the doudtful and illegitimate powers of science.

IV

Nathaniel Hawthorne, in his stories, present the scientists as very ambitious men who refuse to accept human nature as it is. Hence, they try to change it, using their wide knowledge and deep science for this purpose, but they fail spectacularly. Their attempts lead only to misery and death. Evidently, Hawthorne wants to emphasize that humanity,

despite its entire blemish, should be respected as it is, therefore, to attempt to wipe out its foibles, vices, and follies is in itself a folly because it is against the essential human nature as God wills it. Such an attempt, according to Hawthorne, is doomed to failure.

The major mistake of Hawthorne's scientists, Aylmer, Rappaccini, and their like, is that they prefer an idea to the sacred human relations (in Aylmer's case a husband-wife relation, while in Rappaccini's a father-daughter relation). They are obsessed with an idea that takes them to exist beyond compassion and love.[5] This usually leads them to violate the sanctity of human nature, when they turn man into an object of unsafe experiments. It is common to say that the attempt to improve human conditions is good, and one must admit and thank the great efforts of scientists, throughout history, which have led to a better and easier human life. But, unlike Hawthorne's scientists, the real historical scientists have always looked upon man as a sacred entity and excluded him from their experiments. And even in the western societies of today where moral values are rather weak and where technology has taken the scientists to probe into very deep areas of existence such as cloning, experiments are still limited to animals, for there is a strict ban in this respect. According to Hawthorne, the human is sacred and respect for human life is sacred too, but Hawthorne's scientists do not abide by this moral rule, when they turn human beings that love and trust them into mere objects of dangerous experiments. Thus, science at their hands is turned into a means of death and misery, as if Hawthorne wants to say that science without morality to control and guide it becomes a means of destruction rather than of construction.

Finally, it is important to emphasize that Hawthorne's presentation of the scientist as an evil figure does not mean that he has no belief in the significance of science in human progress, but it only shows his fear that the scientist can possibly use his wide knowledge in areas that have no real benefit to human life. In this respect, one must mention that Hawthorne was known, during his lifetime, to be

[5] Terence Martin, "The Method of Hawthorne's Tales", in ed., J. Donald Crowley, *Nathaniel Hawthorne: A Collection of Criticism* (New York: McGraw Hill Book Company, 1975), p.17.

interested in the scientific writings, and he also worked as an editor of a scientific journal called *The American Magazine of Useful and Entertaining Knowledge* in which he wrote many articles on science.[6]

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[6] Samuel James Lubell, p. 7.