

Science and Religion in “The Birth-mark” and “Rappaccini’s Daughter”

By

Yukitoshi Hayashi*

Many of the short tales Hawthorne wrote in 1830's, like “Young Goodman Brown”, treat the historical past of colonial America, especially New England, looked from his age. It covers from the seventeenth century to the early eighteenth century, when Puritanism still had a great influence on people and society. I studied a few of such historical tales in my latest papers and concluded that main points consisted not only in history itself but also in humanity or in problem of mind. After an unproductive period when he served at the Boston Custom House, Hawthorne wrote short tales many of which were not so historical but rather contemporary or neither. I take up two of them, “The Birth-mark” and “Rappaccini’s Daughter. These tales are so famous and seem to be so similar in many respects to each other that I think them worthy to be studied in order to reach Hawthorn’s main idea.

I have just said contemporary. This, however, does not mean that all of his later tales treat his own age and country. “The Birthmark” is set in “the latter part of the last century”(36) and it is vague whether it is set in America or not. As for “Rappaccini’s Daughter,” which is set in Italy, it is difficult to identify its historical age. Seeing the description of Dante and Benvenuto Cellini, the setting is at least likely to be around the sixteenth century. In both cases, historical aspects of New England colony seem to have been quite diminished. In the introductory part of “Rappaccini’s Daughter,” Hawthorne says, “His fictions are sometimes historical, sometimes of the present day, and sometimes, so far as can be discovered, have little or no reference to time or space”(92). Here “his” seems to mean Hawthorne himself. Interestingly, whole of the part seems to be about Hawthorne and his career. Perhaps he describes himself objectively through a person of Aubepine. Hawthorne sometimes tells us about his views of romance in this way. He continues to say, “In any case, he generally contents himself with a very slight embroidery of outward manners, - the faintest possible counterfeit of real life, - and endeavors to create an interest by some less obvious peculiarity of the subject”(92). This is true of even historical tales. We may mistake him if we take our familiar point of view of realism. Therefore, as in “Rappaccini’s Daughter,” we have to take his tales “in precisely the proper point of view” so as not to consider them quite nonsense(92).

I still call these two tales contemporary because they have several points in common related to Hawthorne’s age. One of them is science or scientist. It is said that modern science greatly developed since Francis Bacon and John Locke proposed empirical concept. The Royal Society was founded in 1660. Isaac Newton published Principia in 1687. In the eighteenth century, which is often called the age of reason, there were various scientific discoveries going on. The latter part of this century was parallel with the Industrial Revolution. Various inventions like a steam engine improved by James Watt drove the movement. Aylmer in “The Birth-mark” seems to be one of the scientists in such an epoch. He seems to be familiar with some of the latest discoveries such as a kind of magic lantern, electricity, and

*釧路高専一般教科

daguerreotype. What characterizes him more is his extraordinary love for science. He married beautiful Georgiana not long ago but his love for science was not diminished at all. "His love for his young wife might prove the stronger of the two; but it could only be by intertwining itself with his love for science and uniting the strength of the latter to his own"(37). When he was young before he married, " he had made discoveries in the elemental powers of nature that had roused the admiration of all the learned societies in Europe"(42). He once gives up his investigations "in unwilling recognition of the truth – against which all seekers sooner or later stumble – that our great creative Mother, while she amuses us with apparently working in the broadest sunshine, is yet severely careful to keep her own secrets, and, in spite of her pretended openness, shows us nothing but results"(42). But he decides to resume his investigations for his wife's treatment.

Natural science was still called "natural philosophy" in those days, when natural science was not separated from philosophy. As for epoch-making discoveries, ". . . the comparatively recent discovery of electricity and other kindred mysteries on Nature seemed to open paths into the region of miracle . . ." (36). They were considered to be mysteries and miracles in those days. And it is suggested that scientists might attain "the secret of creative force" and even "man's ultimate control over nature"(36) It is as if scientists violated the realm of God. Aylmer looks like a magician rather than a scientist when he makes a strange plant quickly grow and bear a beautiful flower to console his wife Georgiana. He calls himself "a sorcerer"(49). He tells her "a history of the long dynasty of the Alchemists"(46) and she finds books in his library written by such alchemists as "Albertus Magnus, Cornelius Agrippa, Paracelsus, and the famous friar who created the prophetic Brazen Head"(48). Aylmer himself is also like an alchemist. His love for science is so strong. He is "confident in his science" and feels "that he could draw a magic circle round her within which no evil might intrude"(44). He seems to have invented "the Elixir of Immortality" and "a powerful cosmetic" which is able to clean any freckles(47). His laboratory seems to be an alchemist's as well as a scientist's one, with "the furnace . . . which . . . seemed to have been burning for ages," "a distilling apparatus in full operation," various "apparatus of chemical research," "an[An] electrical machine standing[stood] ready for immediate use," and the atmosphere "tainted with gaseous odors which had been tormented forth by the processes of science"(50). Concerning Aylmer as an alchemist, Reid and Van Leer find parallels between Aylmer and Sir Kenelm Digby. That is, they think that Aylmer represents an alchemical and magical scientist in the seventeenth century. I think that Aylmer has both roles as a scientist in the eighteenth century and an alchemist in the seventeenth century. Or rather he represents a scientific development through the middle ages to Hawthorne's age.

These characteristics of Aylmer can generally be applied to Dr. Rappaccini in "Rappaccini's Daughter." He is also a man of science, a doctor of fame, and a rival of Professor Baglioni. According to Baglioni, he has "insane zeal for science" and "is as true a man of science as ever distilled his own heart in an alembic"(119). "He[he] cares infinitely more for science than for mankind. His patients are interesting to him only as subjects for some new experiment"(99). As Hawthorne says, we have to take allowances for "a professional warfare of long continuance between him[Baglioni] and Doctor Rappaccini"(100). But Baglioni's comments about Rappaccini are justified in general by the description of Rappaccini's garden, an isolated laboratory, where there are his poisonous daughter and poisonous plants of his own making. These two scientists look very similar in their appearance while they are involved in experiments or study. When Georgiana, the wife of Aylmer, happens to look at her husband in his laboratory, "he was pale as death, anxious and absorbed, hung over the furnace as if it depended upon his utmost watchfulness whether the liquid which it was distilling should be the draught of immortal happiness or misery"(50). Giovanni first see the master of the beautiful garden, a figure of "a tall and emaciated,

sallow, and sickly-looking man dressed in a scholar's garb of black"(95). His face is "singularly marked with intellect and cultivation"(95). "Nothing could exceed the intentness with which this scientific gardener examined every shrub which grew in his path: it seemed as if he was looking into their inmost nature, making observations in regard to their creative essence . . ." (95-6). Both scientists are deeply interested in the secret of nature and step into the realm of God. This causes them to go beyond "the limits of ordinary experience"(98). What Giovanni sees in Rappaccini's garden is not his illusion but reality. It is the results of Rappaccini's experiments that Giovanni sees. His unwillingness to believe unfavorable things to his eyes makes what he sees illusion.

The two scientists are similar in that they both fail in their experiment and lose their beloved. Interestingly their experiment is for saving or improving their beloved. Aylmer is trying to remove Georgina's birthmark and gives her a draught of liquid of his own making. Dr. Rappaccini succeeds in making her daughter Beatrice deadly poisonous with his science. But he is responsible for her death because he seems to invite Giovanni into the garden as her daughter's sole partner, which causes her to take the antidote made by Baglioni. Why do they fail? It is attributed to their attitude as a scientist. Reid insists on Aylmer's credulity: "Like the Neoplatonic mystics of old, like the medieval alchemists, like the transcendentalists of Hawthorne's day, he is overly trusting. . . . As a latter-day Platonist he suffers from what Platonists have always suffered in a grand and noble way: a belief in a mystical ladder of ascent to perfection, the creation of heaven on this earth, a metaphysical identity of matter and spirit or an occult correspondence that blurs the dual distinctions of mortal and celestial, present and eternal. . . . The theme is not the dangerous deification of science, . . . but the tragedy of this transcendent, open-minded faith"(348-49). Van Leer sees materialism there: "It is this tradition of magic as crypto-materialism that lies behind Hawthorne's historical allusions in the tale. The misdefinition of spirit as etherealized matter clearly unites the alchemical works on Aylmer's shelf"(215). For example, Paracelsus and Digby represent such materialism. Aylmer also seems to be a member of the genealogy. Van Leer thinks that there are some analogies between Aylmer and Swedenborg and says: "Most important, however, is that Aylmer's tendency to read Georgiana's blemish as 'the symbol of his wife's liability to sin, sorrow, decay, and death' derives from the Swedenborgian notion of correspondences"(217). He locates Swedenborg at the end of the line of "spiritualizing materialists"(218). This is suggested when Georgiana looks at a large book written by Aylmer which is the record of his all experiments. In the book, "he[He] handled physical details as if there were nothing beyond them; yet spiritualized them all, and redeemed himself from materialism by his strong and eager aspiration towards the infinite"(49). In spite of that, ". . . his most splendid successes were almost invariably failures, if compared with the ideal at which he aimed"(49). Van Leer indicates that Aylmer's trouble reflects the situation of troubled idealism in America.

Aylmer loves his wife so much as Rappaccini does his daughter. However, their love for science is as strong as, or stronger than, their love for their beloved. Aylmer thinks of his wife's birthmark as "the visible mark of earthly imperfection"(37) and "the symbol of his wife's liability to sin, sorrow, decay, and death"(39). He even dreams of his attempting an operation to remove the birthmark in which he finds "its tiny grasp appeared to have caught hold of Georgiana's heart"(40). He sometimes recognizes Georgiana's spiritual perfection from her words. But he cannot get contented with it. He connects the birthmark with original sin and thinks that his wife will be perfect if her physical defect is removed. Although he aims at something perfect and eternal and believes it is possible for him to accomplish, it turns to be impossible. His attempt is to spiritualize matter. His scientific attitude surpasses empirical rationalism. It seems even religious. Heilmann takes notice of "the terminology and imagery of religion" in "The Birth-mark"(575): Achievements of science are considered "miracle" and scientists are called "votaries"(576). He says that "science itself has become religion" and that "in religion of science Aylmer is

less priest than God”(577). But the god is not that of dualism but of monistic in that “spirit is not distinct from matter but is the perfecting of matter”(581). Aylmer mistakes a physical defect for a spiritual one.

Rappaccini also bears such religious aspects. First of all, the Rappaccini's garden is like “the Eden of the present world,” where there is a couple who look like Adam and Eve(96). The plants seem to have been grown or even created by Rappaccini. It is possible to consider Rappaccini as God. But the god is irony because the plants he created, and also his daughter, are all deadly poisonous. Both the plants and his daughter are connected with something sexual. Some of the plants have “an appearance of artificialness indicating that there had been such commixture, and, as it were, adultery of various vegetable species, that the production was no longer of God's making”(110). Beatrice calls the poisonous plants “my sister” and embraces them. She even inhales their poisonous perfume “as the breath of life”(97). She seems to have been created by her father's experiment like the plants. Or, was she born as a result of adultery? It is strange that her mother doesn't appear nor be described in the tale. Rappaccini regards his daughter's poison a power or a strength that makes her happy as well as her beauty. He evaluates the physical more than the spiritual. He seems to be a materialistic scientist.

Crews thinks that the tale is “a psychological allegory” and that it reflects “the inner psychological drama of a protagonist”(410). He pays attention to “strong sexual connotations” that the garden has(407). He says, “I think, ‘poison’ must refer to Beatrice's sexuality as Giovanni perceives it”(405). If so, Giovanni is attracted by her beauty but afraid of her sexuality. It is for the same reason that he is afraid of the beautiful plants and flowers in the Rappaccini's garden. Crews thinks that Dr. Rappaccini as well as Giovanni is also afraid of the poisonous plants for the same reason, just like Aylmer, who is afraid of Georgiana's birthmark. He says, “Rappaccini is the God of Giovanni's latent atheism, the God of a godless world”(418). His view is a little too Freudian but important as a way of interpretation of sexuality in the tale. If Beatrice's poison and Georgiana's birthmark represent sexuality and if Rappaccini regards the former as strength to repel against the enemy and Aylmer is afraid of the latter as “the visible mark of earthly imperfection,” so both the scientists are idealistic perfectionists as regards their attempt to make their beloved women perfect on earth. But their idealistic perfectionism seems to be tainted with monistic materialism even if they seek something spiritual. Thus they violate God's territory and try to replace God whether consciously or unconsciously. When Dr. Rappaccini comes near to Giovanni and Beatrice at the end of the tale, he behaves “with a triumphant expression” like God(126). Aylmer's cry of success when Georgiana's birthmark fades out is like that of triumph over God. Their attempt turns out to be unsuccessful and their beloved women die.

Hawthorne critically explains the cause of Aylmer's failure: “The momentary circumstance was too strong for him; he failed to look beyond the shadowy scope of Time, and, living once for all in Eternity, to find the perfect Future in the present”(56). “The[the] shadowy scope of time” may be the scope of mortality or the scope “within the limits of ordinary experience” in “Rappaccini's Daughter.” Both men of science ought to have aimed at something perfect and eternal but actually they misunderstand “the mystery of life,” the fact that “an angelic spirit keep[kept] itself in union with a mortal frame”(55). I think it does not matter whether Beatrice's poison and Georgiana's birthmark represent their sexuality, human imperfection or man's original sin. At least they are physical defects and different from the spiritual, though the physical and the spiritual cannot be separated from each other on earth. Aylmer compares himself and his assistant Aminadab and says, “Matter and Spirit – Earth and Heaven – both have done their part in this[his experiment]”(55). This may be a parallel with the fact that professor Baglioni's antidote causes Beatrice to die. If so, there is the same relation between Rappaccini and Baglioni or Giovanni as between Aylmer and Aminadab. The former in each is spirit and the latter is matter. This results in that each one of them represents monistic thought in each side. It is inevitable for them to fail in their attempts.

Concerning monistic point of view, Daly suggests the dispute between fideists and empirical rationalists. According to Daly, "The basic assumption of fideism is that truth is dual, that truths about matter are within the purview of philosophy and can be arrived at through reason but that truths about spirit are within the purview of theology and can be arrived at only through faith"(33). Here, Rappaccini is a member of the fideists and Baglioni is an empirical rationalist. Therefore, Giovanni should have depended on his faith, not his senses, in order to recognize Beatrice's spiritual truth. But he yields to empirical rationalism of Baglioni. As Daly says, "Giovanni would like some material, observable evidence" although "the only reliable evidences of her soul are her own words."(36) I am doubtful whether Rappaccini is a fideist or not. But it seems suggestive about the problem of matter and spirit. According to Daly, "the arguments between Andrews Norton and George Ripley, between the common-sense philosophers and the Transcendentalists, were reenactments" of the dispute described(34). The problem may be that of Hawthorne's own age. Colacarcio takes notice of religious situation in the former part of the nineteenth century of America. He suggests that "certain arguments about insightful faith and miraculous evidences . . . constitute a theme of considerable importance in the American Renaissance" and refers to "the so-called 'miracles controversy' of the late 1830's and early 1840's" and Transcendentalism represented by Emerson(13). From Transcendental point of view, miracles as visible evidences does not matter. Emerson thinks, according to Colacarcio, "spirit is its own evidence" and "spirit is accessible only through that 'faith' which is the soul's ability to recognize and embrace its proper good with intuitive immediacy"(16). Ripley thinks, as Colacarcio says, "Properly speaking, faith is the result of a personal encounter with the Incarnated Word and, like any personal encounter, it is essentially vocal"(17). If these views are applied to Hawthorne's tales, Giovanni can be said to fail in recognizing Beatrice's true spirit as a result of adopting empirical evidences, not spiritual evidences of her words. This means empirical rationalists cannot have true faith. Colacarcio says, "As in Dante, Hawthorne's Beatrice is offered as a genuine incarnation of divine truth and goodness."(19) This "divine truth and goodness" indicates Beatrice's spiritual truth and goodness shown with her words. She says, ". . . But the words of Beatrice Rappaccini's lips are true from the depths of the heart outward. Those you may believe!"(112).

It is ironic that Giovanni is ambivalent between her beautiful but poisonous body and her truly beautiful spirit. The shocking incidents that Giovanni witnesses from his window bother him because they seem to show the poison of Beatrice's body. Though he perceives spiritual goodness of Beatrice, he cannot resist his doubt. Thinking that the incidents may be his eyes' deception as they are witnessed from a distance, he decides to test "whether there were those dreadful peculiarities in her physical nature, which could not be supposed to exist without some corresponding monstrosity of soul"(120). He cannot accept this fact: "There is something truer and more real, than what we can see with the eyes, and touch with the finger"(120). Is the poison of Beatrice a test offered by God to tell whether Giovanni could have true faith or not? His failure results from the fact that he is affected by Baglioni's empirical rationalism. But we should also pay attention to his spiritual character like "vanity," "shallowness" and "insincerity"(121). These are his "poison," which is much worse than Beatrice's one because his poison consists in his "weak, and selfish, and unworthy spirit"(126). It is impossible for such a young man to attain her spiritual truth.

I focus on religious and scientific aspects of the two tales. They seem to reflect some conflicts between different sects or factions concerning ideas and methodologies in Hawthorne's age. Since the independence of 1776, America tries to expand its territory, especially toward the west, fighting with other countries and native Americans. A lot of people are engaged in the reclamation with the frontier spirit. It is also the process that uncivilized land is being civilized. Science and technology are rapidly developing and their achievements are practically used for American society as railways and telegraph.

It may be easy to imagine that materialism is predominant in such a society. On the other hand, there appear religious ideas against traditional Calvinism like Unitarianism and Transcendentalism, especially in New England. Hawthorne joins the Brook Farm project, the experiment of Transcendental ideas in 1841, though he leaves the Farm with just a short stay of half a year. Hawthorne calls his isolated position as a writer “an unfortunate position between Transcendentalists . . . and the great body of pen-and-ink men who address the intellect and sympathies of the multitude” under the name of Aubepine(91). Hawthorne uses tools of gothic romance to be more impressive. Dr. Rappaccini and professor Baglioni are among the “mad scientists” typical of gothic romance and science fiction. They get over “the limits of ordinary experience.” The beautiful women die as the victims of “man’s ingenuity and of thwarted nature, and of the fatality that attends all such efforts of perverted wisdom”(128). From the scientific point of view, they are tragic but, in a sense, inevitable victims for scientific development. On the other hand, they seem to be willing to die for the men they love even if they implicitly criticize the men’s spirit. Both of the two women seem to be aware that the men’s attempts will fail in the end. Georgiana takes a draft of medicine that Aylmer makes. Beatrice takes antidote that Baglioni makes before Giovanni takes it. Their spirits are really worthy of going to heaven. From the religious point of view, the deaths of the women are self-sacrifice and the proof of their spiritual truth. The men who confuse physical nature with spiritual one are forced to recognize their mistake only when they lose “the best that earth could offer”(55). They are successful as scientists but their materialistic and monistic idealism destroys religious and spiritual values.

Works Cited

Hawthorne, Nathaniel. “The Birth-mark.” Mosses from an Old Manse. Ohio State UP, 1974. Vol. 10 of

The Centenary Edition of the Works of Nathaniel Hawthorne, 23 vols. 1962-94.

---. “Rappaccini’s Daughter.” Mosses from an Old Manse. Ohio State UP, 1974. Vol.

10 of The Centenary Edition of the Works of Nathaniel Hawthorne, 23 vols. 1962-94.

Crews, Frederic. “Giovanni’s Garden.” American Quarterly 16(1964): 402-18.

Coracurcio, Michael J. “A Better Mode of Evidence – The Transcendental Problem of Faith and Spirit.”

Emerson Society Quarterly 54(1969): 12-22.

Daly, Robert J. “Fideism and the Allusive Mode in ‘Rappaccini’s Daughter.’” Nineteenth-Century Fiction

28(1973): 25-37.

Heilman, Robert B. “Hawthorne’s ‘The Birthmark’: Science as Religion.” South Atlantic Quarterly

48(1949): 573-83.

Reid, Alfred S. "Hawthorne's Humanism; 'The Birthmark' and Sir Kenelm Digby." American Literature
38(1966): 337-51.

Van Leer, David. "Aylmer's Library: Transcendental Alchemy in Hawthorne's 'The Birthmark.'" Emerson Society Quarterly 22(1976): 211-21.

Works Consulted

Matthiessen, F. O. American Renaissance New York: Oxford UP, 1941.

Okada, Ryoichi. Short Tales of Hawthorne – Literature, Love, Existence Tokyo:
Hokuseido Shoten, 1996.

Yagi, Toshio. The Water Vein of American Gothicism Tokyo: Kenkyusha, 1992.