

Occultism in Medicine and in Everyday Life During the Renaissance

RÖNESANS SIRASINDA TIPTA VE GÜNLÜK YAŞAMDA OKÜLTİZM

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Abstract

The author discusses some irrational beliefs held during the Renaissance and describes episodes related to them.

It is concluded that, in spite of the fact that the Renaissance was characterized by a more objective evaluation of reality, old unscientific ways of thinking, characterized by prejudice and superstition were not completely abandoned and affected medicine as well as everyday life.

Key Words: Occultism, renaissance, history of medicine

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Özet

Yazar, Rönesans sırasında inanılan akıldışı inançları tartışmata ve bunlarla ilgili olayları tanımlamaktadır.

Rönesansın gerçekliğin daha objektif değerlendirilmesi olarak tanımlanmasına rağmen önyargı ve hurafelerle karakterize eski bilim dışı düşüncelerin tamamen terkedilmediği ve günlük yaşamı olduğu kadar tıbbi da etkilediği sonucuna varılmaktadır.

Anahtar Kelimeler: Oskültizm, rönesans, tıp tarihi

The Renaissance is usually considered a watershed of Western thought in which old prejudices and superstitions were abandoned in favor of empirical investigation and objective evaluation of reality. The figures of Machiavelli and Copernicus come to mind, men who were not afraid to see reality as it is, free from prejudices and misconceptions.

Although this idea of the Renaissance is fairly accurate, the intellectual "rebirth" of the sixteenth century also included a dark side in which the opposite of rationality prevailed.

The Renaissance, in fact, was also a golden age for occultists and impostors. Alchemists and astrologers were protected by popes and kings. Rudolph II of Hapsburg (1552-1612), who ruled the Holy Roman Empire from 1576 until his death, was one of their great patrons, although he also patronized such men as Tycho Brahe and Kepler. In other words, at the time, together with an enlightened objective perception of reality, the belief that occult forces influence human affairs was widespread.

Occultism, which includes such practices as witchcraft, alchemy, magic and astrology, can be seen as an attempt to attain results that would otherwise be difficult or impossible to achieve. Precious metals, for example, are difficult to find and costly to extract, but with the help of alchemy they could be easily and cheaply obtained. Similarly, with magic, one could become healthy and wealthy without effort and even obtain what is usually considered unobtainable, for example, eternal youth; witchcraft, by utilizing malignant powers, would

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give its practitioner supernatural capacities (e.g., the ability to kill enemies at a distance and fly on broomsticks); with astrology one could foretell the future and explain the cause of events (e.g., wars, epidemics) otherwise difficult to elucidate.

Witchcraft

The most absurd belief common during the Renaissance concerned the existence of witches and witchcraft. Although such a belief goes back to early Christian times, it was then considered a relic of paganism and not feared. A canon of the Church, as early as the ninth century, declared that women who believed that they, as witches, could ride through the air, were only deluded by the devil; the laws of Charlemagne considered it murder to put anyone to death on a charge of witchcraft;¹ Pope Nicholas I (d. 867) condemned the use of torture to induce confession and Gregory VII (d. 1085) forbade the prosecution of witches and sorcerers for causing plague and bad weather.² In other words, before the Renaissance, although witches and witchcraft were believed to exist, they were not persecuted with the mindless ferocity of the later period.

Many Renaissance authors feared witches and supported their persecution (e.g., the Frenchman Jean Bodin (1530-1596) and the Hispano-Belgian Jesuit Martin Delrio (1551-1608), whose *Disquisitiones magicae* were first printed in 1599-1600 and often reprinted and translated into French),³ although voices of reason, even if ignored, were not completely still. The Dutch doctor Johann Weyer (c1515-1588), personal physician to Duke Wilhelm of Julich-Cleve-Berg, in his *De praestigiis daemonum et incantationibus ac veneficiis* (1563) asserted that the belief in witchcraft was a delusion. In a letter to his patron written after the manuscript of *De praestigiis demonum* had been completed, Weyer wrote:

To you, Prince, I dedicate the fruit of my thought. For thirteen years your physician, I have heard expressed in your Court the most varied opinions concerning witches; but none so agree with my own as do yours, that witches can harm no one through the most malicious will or the ugliest

exorcism, that rather their imagination-inflamed by the demons in a way not understandable to us-and the torture of melancholy makes them only fancy that they have caused all sorts of evil. For when the entire manner of action is laid on scales, and the implements therefore examined with careful scrutiny, then soon there is shown clearly before all eyes and more lucid than the day, the nonsense and the falsity of the matter. You do not, like others, impose heavy penalties on perplexed, poor old women. You demand evidence, and only if they have actually given poison, bringing about the death of men or animals, do you allow the law to take its course.⁴

Weyer, in his condemnation of witch-hunts, was preceded by Andrés de Laguna c.1500-c.1560), a physician, whose views were published incidentally in his commentary on Dioscorides (Antwerp, 1555).⁵ There were others.⁶

The existence of witches was asserted, and the fear of them reinforced, by the 1484 bull *Summis desiderantes* of Innocent VIII and by the *Malleus maleficarum* of the two Dominicans, Jacob (or James) Sprenger and Heinrich Kramer, first printed in 1486. Both contributed to innumerable persecutions.

The following are examples of what was considered justice at the time.

At Lindheim, a woman was accused of having stolen from the grave a body of an infant (the flesh of infants was alleged to be used for food at witches' Sabbaths). She confessed, under torture, and the names of four accomplices were extracted from her. The infant's grave was then opened and the body of the infant was found uninjured. The judges decided that this was obviously a ruse of the devil and all five women were burnt alive.⁷

Although women were usually the victims of witch-hunts, this was not always the case. A man confessed, under torture, that he was a werewolf and that, in that form, he had killed a calf of a neighbor. The latter testified that he had never lost a calf although a few years before two hens had disappeared through witchcraft, he believed. On the basis of his confession, the accused was burnt.⁸

Torture was customarily used to obtain confessions from the accused. The will of the unfortunate victims was broken by the unspeakable conditions of the prisons. The following is a description, by an eye-witness, Anton Praetorius (1560-1613), of the dungeons where the accused were kept:⁹

Some [of the dungeons] are holes like cellars or wells... with openings above, through which they let down the prisoners with ropes and draw them up when they will. Such prisons I have seen myself. Some [prisoners] sit in great cold, so that their feet are frost-bitten or frozen off, and afterwards, if they escape, they are crippled for life. Some lie in continual darkness, so that they never see a ray of sunlight, and know not whether it be night or day. All of them have their limbs confined so that they can hardly move, and are in continual unrest, and lie in their own refuse, far more filthy and wretched than cattle. They are badly fed... And since they cannot move hands or feet, they are plagued and bitten by lice, rats, and other vermin, besides being daily abused and threatened by gaolers and executioners. And since all this sometimes lasts months or years, such persons, though at first they be courageous, rational, strong, and patient, at length become weak, timid, hopeless, and if not quite, at least half idiotic and desperate.¹⁰

Andrés de Laguna wrote the following account which underlines how, under torture, the most detailed (and absurd) admissions of guilt could be extracted:

When I was municipal physician for the town of Metz, I visited Duke Francis of Lorraine, who was ill in Nancy in the year 1545. At that time there appeared before his Lordship the town council demanding justice and vengeance against two unfortunate old people, who were husband and wife and who lived in a hermit's cabin a half a league from that city, because (according to popular rumor) they were notorious wizards, burning all the new-sown land killing all the live stock, and sucking the blood of the children, and had done terrible damage. When he had heard these serious charges, the Duke sent to arrest them and put them to the torture; they thereupon confessed all the charges, and among other frightful deeds they af-

firmed that they had murdered the Duke's father, Duke Anthony; they also stated that they had given him, Francis, the grave malady which little by little was destroying him. The Duke asked them in what manner and form they had caused his malady. The old man said that it was because His Excellency had not washed his feet on the preceding Maundy Thursday; he [the old man] had been one of the twelve poor to appear for the ceremony as was the use and custom of the land, and he had fallen into great melancholy when the ceremony was not performed. When he saw the Devil in his circle afterward he was asked by the Devil to tell the reason for his sadness. Having heard the story, the Devil asked him whether he wished to be avenged of the Duke, and, if he did, to take the worm the Devil offered him, and when he saw the Duke pass by his hermitage to throw it before the hooves of his horse and this would make the horse stumble and crush the Duke. But if he did not wish to kill him, but only to have him fall sick, then to go up to him on the road as though to beg alms then to contrive to breathe in his face; "then," said the Devil, "I shall be at your back and I shall breathe on the back of his head and I shall so infect him that only you will ever be able to cure him again." In this fashion, said the wizard he had infected the Duke, with the intention of curing him soon after with a secret remedy which his master the Devil had taught him. And then, although the council was resolved that both of them should be burnt, the Duke showed mercy to the old man because of the hope of a cure for his malady. Thereupon the old witch was reduced to cinders in the presence of her husband who was given gifts by the Duke and favored by him; and the Duke spared his life, although he kept him closely watched.¹¹

It is of interest that in an age when, in the interaction between human intellect and external reality, objectivity and rationality were becoming increasingly important, one of the most shocking pages of folly and cruelty was written.

Alchemy

If the persecution of witches causes revulsion, alchemy and alchemists arouse, in the modern

reader, a feeling of amusement. This was often also the case at the time. Giordano Bruno (1548-1600), for example, wrote:

Because he [i.e., the alchemist] got into his head the hope of discovering the Philosopher's stone, he has come to the point where his annoyance is eating, his uneasiness is to go to bed because the night seems to him long as it is to children who have new clothes to wear next day. Everything bothers him, time spent in any activity is bitter to him: his paradise is only the furnace.¹²

Nevertheless, many during the Renaissance believed in alchemy and pursued the Philosopher's Stone, the substance alleged to be capable of transforming base metals into gold, with untiring energy (Newton, for example, was interested in alchemy).¹³

Certain aspects of alchemy, became fashionable, distillation, for example, because the isolation of alcohol allowed the preparation of medicines which, taken in sufficient quantity, improved greatly if not the health at least the mood of the patient. Leonardo Fioravanti (c.1517-c.1588), for example, called it the "new art of alchemical medicine," and the religious order of the Jesuati,¹⁴ sometimes called "the aquavit brothers," specialized in making elixirs and cordials that were believed to preserve the body from corruption and putrefaction.¹⁵ The notion of the beneficial effects of alcohol can be traced to the ideas of the alchemist John of Rupescissa (fl. c.1350), according to whom alcohol was the incorruptible "fifth essence" of all substances.¹⁶

As alchemy was concerned with the interaction of chemical compounds, it may have had some influence on the development of chemistry, if not directly, perhaps by preparing the minds of practitioners for the idea that chemical compounds could "react" with each other in what were later to be called "chemical reactions."

In 1597, Andreas Libavius (1540-1616) published a work, *Alchemia*, which may be considered the watershed between alchemy and chemistry. Libavius was born in Halle, Saxony, obtained his medical degree and became professor of history

and poetry at Jena and, later, director of the gymnasium of Coburg, where he died. His main writings were devoted to alchemy. The most important, *Alchemia*, was a survey of contemporary knowledge on the subject, in which he tried to explain what we would call "chemical reactions" in plain language. The work has been called the first textbook of chemistry, although the definition is exaggerated as two more centuries had to elapse before the chemical science was born. *Alchemia* was a reaction against Paracelsism, occultism and extravagance. There is no doubt, however, that Libavius' attitude was more that of a chemist than that of an alchemist and the discovery of several chemical compounds is credited to him (e.g., stannic chloride, *liquor fumans Libavii*).¹⁷

Magic and Astrology

Magic, astrology, and other forms of occultism were commonly accepted during the Renaissance and were believed valid even by authors whom we consider pillars of the emerging scientific movement (Harvey apparently believed in the healing effect of the application of the hand of a dead man to a tumor;¹⁸ Kepler practiced astrology; and Newton, as mentioned above, pursued alchemical studies). We must not be surprised therefore if individuals with less capacity for objective evaluation of natural phenomena believed that occult forces influenced the material world and human affairs. Paracelsus (1493-1541) considered himself a necromancer, geomancer, hydromancer and magus; Fioravanti believed that one could cure the plague by burying the patient up to the neck and that he had compounded medicines that could cure all diseases; Gerolamo Cardano (1501-1576) claimed the most preposterous experiences and capacities (e.g., to have seen a cock speaking with the voice of a man; to feel sometimes the contact of an invisible hand; to be able to divine the future).

Prejudices and Taboos

If the belief in occult forces casts a shadow on the rational approach to the study of nature characteristic of the time, the acceptance of innumerable

prejudices should also moderate our tendency to see the Renaissance as continuously and blissfully bathed in the light of reason and rationality. Without reviewing all the medical prejudices that were held at the time (e.g., fetal malformations were due to sin; the outcome of diseases was dependent on the position of celestial bodies), we will mention the following related to obstetrics:

[Dr. Werth of Hamburg] realized that he could only study the process of birth at an actual labour, and knew that as a man he would never be admitted to a lying-in room. He dressed himself as a woman and went boldly in to the next confinement in the district. This was in 1522. For a brief while all went well, then somehow or other one of the midwives realized that he was a man masquerading in a woman's garments. The mere idea of a male being present at a confinement raised a storm of protest. Punishment was swift and salutary. Werth was burned to death. Other physicians watched him die and realized then, if they had not done so before, that midwifery was a woman's art still protected by every possible taboo. Only one other group of men had been known to enter a lying-in chamber. Martin Luther told the story of an Empress of Germany whose labour was slow and protracted. It was still generally accepted that any procedure which frightened the mother might accelerate labour. Some authorities held that whipping the mother would cause fear and distress and so promote the expulsion of the fetus. Whipping the Empress was out of the question. The alternative was simple. Twenty-four men were brought in succession into the imperial lying-in chamber and flogged. Two of them died as a result and the labour continued, still slow and protracted.¹⁹

And the etiological explanation of gangrene by Woodall (1556-1643), a surgeon at St. Bartholomew's Hospital in London:

A history or a relation of a remarkable example of an amputation by me performed upon a woman in Saint Bartholomew's Hospital of both her legs, and part of seven of her fingers, in one morning together all taken off in the mortified part, without pain or loss of blood or spirits at all, and

the woman was living at the writing hereof, and the patient was a certain poor maid or woman servant in London, named Ellen French, of whom there were made books and ballads, that were sung about the streets of her, namely, that whereas the said maid or servant was given to pilfering, and being accused thereof by her master and mistress, used to curse and swear and with words of execration to wish, that if she had committed the crime she stood accused of, that then her legs and hands might rot off, the which thing accordingly, no doubt by the providence of God, came to pass, as a judgement upon her, namely that both her legs almost to the gartering place, with parts of seven of her fingers did rot off, the which wretched woman nevertheless, being referred to me in Saint Bartholomew's Hospital to be cured, by God's mercy and permission, I healed her perfectly, but cutting off both her sphacelated legs in the mortified parts with also parts of her seven fingers, as is said, all in one morning without pain, terror or any loss of blood unto her, in the taking them off, and made her perfectly whole in a very short time, namely within three months, so merciful is God unto us vile creatures, when we are most unworthy of such his mercies.²⁰

The influence of occultism on the development of science has been much discussed and debated among historians of science in the last several decades. According to Vickers,²¹ one can distinguish three main stages in the debate. In the first, magic and the occult is considered irrelevant;²² the second stage inaugurated a tendency to make a more positive claim for the occult²³ and continued into the extreme belief that the occult made the scientific revolution possible;²⁴ the third stage, still according to Vickers, was characterized by a split field in which some supported the view that the occult had a formative influence on science²⁵ and others challenged it.²⁶

We believe that we are now in the fourth stage, dominated by postmodernists, deconstructionists, and useful fellow-travelers, who accept anything (including magic and occultism) except the validity of science and who deny the existence of scientific progress and empirical truth.²⁷

In our opinion occultism is irrelevant in the emergence of science with the possible exception of alchemy, which, as mentioned above, may have had a preparatory effect on the development of chemistry. In any case, this positive effect, assuming that it existed, was of limited importance as, even without alchemy, chemistry would have developed more or less when it did.

The fact that many authors who opposed the occult mentality themselves retained occult beliefs has been discussed at length in the history of science. The phenomenon must be understood in the light of the realization that long-held beliefs can be eradicated only slowly and even then, quite often, imperfectly. In spite of the fact that several centuries have elapsed since the scientific revolution, alternative medicine, homeopathic medicine, touch healing, new age philosophy, crystal power, reincarnation, astrology, etc., are now very popular. It is evident that foolish notions continue to reappear in history in seemingly unending cycles. Man does not learn easily. We must acknowledge, however, that although in our time we have indeed our prejudices and taboos, they are more benign than the ones mentioned above (at least in medicine). Perhaps, over the centuries, in some cases, man's behavior is becoming less grotesque.

REFERENCES

1. Withington ET. In: "Dr. John Weyer and the Witch Mania," in: *Studies in the History and Method of Science*, edited by Charles Singer. London: William Dawson&Son; 1955. p.189-224 (191).
2. Withington ET. In: "Dr. John Weyer and the Witch Mania," *Studies in the History and Method of Science*, edited by Charles Singer. London: William Dawson&Son; 1955. p.189-224 (192).
3. George S. *The Appreciation of Ancient and Medieval Science during the Renaissance*. Philadelphia: University of Pennsylvania Press; 1955, p.125.
4. Quoted by Zb In: Gregory Z. *The Medical Man and the Witch During the Renaissance*. Baltimore: Johns Hopkins; 1935. p.119.
5. George S. *The Appreciation of Ancient and Medieval Science during the Renaissance*, Philadelphia: University of Pennsylvania Press; 1955. p.125. See also Chapter IV, A, h.
6. As, for example, Anton Praetorius mentioned below, and the Jesuit Father Spee (E. T. Withington, In: "Dr. John Weyer and the Witch Mania," *Studies in the History and Method of Science*, edited by Charles Singer, London, William Dawson&Son; 1955. p.189-224 (204).
7. Horst GC. *Zauberbibliothek*, Mainz, 1821-1826, VI Vols., II, p. 374. Quoted by Withington In: Withington ET. "Dr. John Weyer and the Witch Mania," in: *Studies in the History and Method of Science*, edited by Charles Singer, London: William Dawson&Son; 1955. p.189-224 (205).
8. Horst GC. *Dämonomage*, Frankfurt, 1818, II Vols, II, p. 412. Quoted by Withington In: Withington ET. "Dr. John Weyer and the Witch Mania," in: *Studies in the History and Method of Science*, edited by Charles Singer. London: William Dawson&Son; 1955. p.189-224 (205).
9. Anton Praetorius, born Anton Schulze, was a German protestant minister who opposed the torture and prosecution of witches. In 1598, he published the book *Gründlicher Bericht von Zauberey und Zaubern* ("Thorough Report on Witchcraft and Witches") under the pseudonym "Johannes Scultetus." In 1602 he dared to publish it under his own name. The work, widely read, was published again in 1613 and, posthumously, in 1629.
10. Anton Praetorius, *Gründlicher Bericht von Zauberey und Zaubern*, p. 211. Translated and quoted by Withington in: E. T. Withington, "Dr. John Weyer and the Witch Mania," in: *Studies in the History and Method of Science*, edited by Charles Singer, London: William Dawson&Son; 1955. p.189-224 (203).
11. Spanish translation with annotations of Andrés de Laguna of: *Pedacio Dioscorides Anazarbio, acerca de la materia medicinal, etc.*, Salamanca, 1566, p. 421. Translated and quoted by Friedenwald in: Harry Friedenwald, "Andres a Laguna, a Pioneer in His Views on Witchcraft," in Harry Friedenwald, *The Jews and Medicine*. Baltimore: The Johns Hopkins Press; 2 Vols., 1944 (reprinted by Ktav Publishing House, 1967), II, p.419-429 (423-424).
12. Giordano Bruno, *Il Candelaio*. Italian text quoted by Perfetti in: Amalia Perfetti, "L'Alchimia a Napoli tra Cinquecento e Seicento: Leonardo Fioravanti e Giovan Battista della Porta," *Giornale Critico della Filosofia Italiana*, LXXVI, 171-183, 1997.
13. Richard S. Westfall, "Newton and Alchemy," in: *Occult and Scientific Mentalities in the Renaissance*, edited by Brian Vickers, Cambridge, Cambridge University Press, 1984, p. 315-335. See also: Brian Vickers, "Introduction" in: *Occult and Scientific Mentalities in the Renaissance*, edited by Brian Vickers. Cambridge: Cambridge University Press; 1984. p.1-55.
14. Not to be confused with the Jesuits, the Jesuati were an order "founded in the fourteenth century by Giovanni Colombini (c. 1300-1367), a wealthy Siense merchant who gave away all his possessions in order to live as a mendicant. The order he founded dedicated itself to caring for victims of the plague. The order was disbanded in 1668 by Pope Clement IX supposedly because of abuses connected with the manufacture and distribution of alcoholic beverages." William Eamon, "Alchemy in Popular Culture: Leonardo Fioravanti and the Search for the Philosopher's Stone," *Early Science and Medicine*; V, 2, 196-213, 2000.
15. William Eamon, "Alchemy in Popular Culture: Leonardo Fioravanti and the Search for the Philosopher's Stone," *Early Science and Medicine*; V, 2, 196-213, 2000.

16. Its use as an efficacious medicine was widely accepted at his time, in part because of its advocacy by Arnald of Villanova (c.1240-1311). Robert P. Multhauf, "John of Rupescissa and the Origin of Medical Chemistry," *Isis*, XLV, 4, 359-367, 1954; William Eamon, "Alchemy in Popular Culture: Leonardo Fioravanti and the Search for the Philosopher's Stone," *Early Science and Medicine*, V, 2, 196-213, 2000.
17. George Sarton, *The Appreciation of Ancient and Medieval Science during the Renaissance*, Philadelphia, University of Pennsylvania Press, 1955. p.29-130.
18. Walter Pagel, "William Harvey Revisited: I," *History of Science*, VIII, 1-31, 1969.
19. Harvey Graham, *Eternal Eve: The History of Gynecology and Obstetrics*, New York: Doubleday; 1951. p.148.
20. W. J. Bishop, *The Early History of Surgery*. London: Robert Hale; 1960. p.92-93.
21. Brian Vickers, "Introduction" in: *Occult and Scientific Mentalities in the Renaissance*, edited by Brian Vickers, Cambridge: Cambridge University Press; 1984. p.1-55.
22. Brian Vickers, "Introduction" in: *Occult and Scientific Mentalities in the Renaissance*, edited by Brian Vickers, Cambridge, Cambridge University Press, 1984, p.1-55. Butterfield, the author of *The Origin of Modern Science*, published in 1957, is considered a late representative of this first phase.
23. This phase, according to Vickers, started with Lynn Thorndike and his *History of Magic and Experimental Science*, published in eight volumes between 1923 and 1968.
24. This extreme view of the second phase, Vickers says, was held by Yates (Frances Yates, "The hermetic Tradition in Renaissance Science," in: *Art, Science, and History in the Renaissance*, edited by Charles S. Singleton, Baltimore, 1967, p. 255-274).
25. See, for example, P. M. Rattansi, "The Intellectual Origins of the Royal Society," *Notes and Records of the Royal Society*, 23 (1968), p. 129-43, and "Some Evaluations of Reason in Sixteenth- and Seventeenth-Century Natural Philosophy," in *Changing Perspectives in the History of Science*, ed. M. Teich and R. Young, London, 1973, p. 148-66.
26. For critiques of the Yates claims, see Mary B. Hesse, "Hermeticism and Historiography: An Apology for the Internal History of Science," in *Historical and Philosophical Perspectives of Science*, ed. R. H. Stuewer, Minneapolis, 1970, p. 134-60, and "Reasons and Evaluation in the History of Science," in Teich and Young (eds.), *London: Changing Perspectives in the History of Science*; 1973. p.127-447.
27. See: Plinio Pioreschi, *A History of Medicine, Vol. I, Primitive and Ancient Medicine*, Omaha, Horatius Press, 1996, Foreword; Plinio Pioreschi, *A History of Medicine, Vol. III, Roman Medicine*, Omaha, Horatius Press; 1998, Foreword.
28. Brian Vickers, "Introduction" in: *Occult and Scientific Mentalities in the Renaissance*, edited by Brian Vickers, Cambridge, Cambridge University Press; 1984. p.1-55.