

The History of Thinking About Miracles in the West

Jakub Pawlikowski, MD, MPhil

Phenomena considered to be miracles have been present in human culture since its origins. There have been astronomical, meteorological, and biological occurrences, and they have attracted the attention of ordinary people, artists, and thinkers. Each of these groups has tried to explain the curious phenomena or to express amazement in its own way: by means of piety or fear, creating artistic masterpieces, or theoretical reflection. Reflections on miracles (apologetic or skeptical) by philosophers and theologians, as well as writers and scientists (eg, physicians, physicists, and sociologists), have usually occurred in religious contexts.

The issue of miracles is complicated and multidimensional. The word “miracle” comes from the Latin *miraculum*, which is derived from *mirari* (to wonder). Thus, the most general characterization of a miracle is an event that causes wonder. As such, it must also be in some way unusual, extraordinary, or contrary to our expectations. Nevertheless, there have been numerous definitions of miracles, and it is difficult to present a detailed and commonly accepted one.¹⁻³ But there are some aspects of miracles to which almost all definitions point, namely, miracles being extraordinary, related to nature (being in some sense beyond, above, contrary to nature, etc.), and triggered by factors differing from natural causes that are already known.*

I. Ancient Times

Greco-Roman Culture: The World of Gods, Heroes, Divine Kings, and Philosophers

We can find evidence of events considered to be miracles (including miraculous healings) already in the ancient writings. According to the ancient Greeks and Romans gods,



Jakub Pawlikowski, MD, MPhil

heroes (people elevated to divinity due to their exceptional merits), and a few exceptional people, were able to perform miracles.^{4,5†}

The Greeks maintained that the world had not been created but had emerged from Chaos, or was simply eternal. The gods were believed to be just a part of the world; even if they did not have absolute power over natural phenomena, they had enough power to be considered by humans as causing miracles. Each god or hero had his or her own specific domain of activity. Miraculous healings were ascribed almost exclusively to Asclepios,[‡] Heracles,[§] or Isis. The most worshiped among them was Asclepios. In ancient Greece, his temples (there were about 300 of these) were the destination of pilgrimages and the site of numerous healings—in Epidaurus in the Peloponnese, many scriptures and votive offerings expressing gratitude for being healed were found.^{||} In addition, some philosophers (such as Pythagorus or Empedocles) were believed to be thaumaturgic as well, although they themselves denied performing miracles and claimed that they simply knew nature.^{4¶}

From the Department of Ethics and Philosophy of Medicine, Skubiszewski Medical University of Lublin, Poland, and the Department of Anthropology, University of Deusto, Bilbao, Spain. Dr. Pawlikowski is a Fellow of Marie Curie Fellowships Program of the European Union.

Reprint requests to Dr. Jakub Pawlikowski, Zakład Etyki, ul. Szkolna 18, 20-124, Lublin, Poland. Email address: jpawlikowski@wp.pl

Accepted July 2, 2007.

Copyright © 2007 by The Southern Medical Association

0038-4348/0-2000/10000-1229

*It should be noted that the cause of miracles is not easily accessible to the people who do not experience them. However, people who claim they have experienced miracles (for example, a person that has been miraculously healed) are usually strongly convinced of the divine intervention. This conviction seems to be an essential characteristic that distinguishes miraculous healings from other spontaneous or unexplained healings.

[†]Only people who had special characteristics were said to be able to cause miracles. For example, they could have an exceptional knowledge of nature (such as Pythagoras, Empedocles), lead the life of a saint (such as Apolonius of Tiana), be anointed or be an incarnation of a god (this tradition had its roots in the time of pharaohs, revived in the Roman Empire and some modern monarchies).

[‡]The first records about Asclepios can be found in Homer's writings. According to legend, Zeus killed Asclepios with a thunderbolt because he had raised people from the dead. Apollodorus names six men who were raised by Asclepios.⁴

[§]Heracles was thought to know people's worries because, before being elevated to divinity, he had been a man. He was said to have raised Alcestis (Admetus' wife) from the dead. The event was described in the poem *Alcestis*.^{4,6}

^{||}Inscriptions from the 4th century BC contain tales about the restoration of a man's eyeball in an empty eye socket, healing a woman suffering from abdominal dropsy, and healing epileptics and people who were paralyzed or disabled. One can find some records of raising people from the dead.⁴

[¶]Pythagorus was said to predict earthquakes, overcome plague, and calm winds and storms. Empedocles was attributed with overcoming plague and healing hopelessly sick people.⁴

Belief in miracles persisted in the days of the Roman Empire. In the 1st century BC, one of the most famous thaumaturges flourished—Apollonius of Tyana, who was believed to heal sick people, to walk on water, to bilocate, to levitate, and to raise people from the dead.⁷ Svetonius and Tacitus reported that Vespasian Caesar had healed two sick people (one of them being blind, the other crippled) in Alexandria.⁴ The temples of Aesculapius (the Roman spelling of Asclepius) were very popular at that time—the most famous among them being that in Pergamon. The methods of curing used in these places became more rational: healing baths and strolls rather than oneirotherapy (“sacred sleep”). This rationalization of the treatment process probably contributed to the fact that the temple’s records of that time no longer mention any acts of sudden healing. On the other hand, the records reveal many acts of gratitude for health improvements.⁸

The development of philosophy and science caused the differentiation of attitudes toward the perception of gods, nature, and humans and the emergence of some skeptical views on miracles. Cicero (1st century BC) maintained that miracle stories were only useful for the piety of ignorant folk. Celsus, after Epicurus, claimed that the gods were not interested in human affairs. He undermined the credibility of Christian miracles by arguing that we could fail to recognize somebody’s death and believe the wakening has a miraculous character, as in the case of Asclepiades. This physician, who lived in the 1st century BC, was credited with raising a girl from the dead. But he himself believed that he had simply recognized the signs of life. Sextus Empiricus (3rd century AD), a representative member of the Skeptics, doubted the truth of the stories about Aesculapius and his miraculous healings because those stories appeared to differ substantially, depending on the teller’s imagination.⁴

The First Centuries of Christianity: The Created World Dependent on God

Christianity has its roots in Judaism and is based on the Biblical image of God and His relation to the world. That image was different from that of the ancient Greeks and Romans and their understanding of miracles as well. In the Bible, God created the world, and all phenomena were related directly to Him; therefore, miracles were not essentially different from other occurrences. They were thought to be a kind of special sign given by God to Man; they made the missions of the Prophets more credible or confirmed the truth of the Prophets’ teachings.[#] A similar statement can be made about the miracles performed by Jesus and the Apostles, which

[#]In the Holy Bible, one can find many terms signifying a miracle; these are *oth* (Gr. *semeion*, Eng. *sign*); *geburah* (Gr. *dynamis*, Eng. *the act of God’s power*); *ma’ase’* (Gr. *ergon*, Eng. *God’s work*); and *mophet* (Gr. *teras*, Eng. *thing that provokes wonder*). Contrary to the Greek writings of that time, the term *oth* (*sign*) was used more often than terms related to the Greek *dynamis* or *teras*.¹⁰

played a relevant role in the development of the original Christian Church, at the same time challenging the Greek and Roman thinkers.^{9–11}

The first few centuries AD were a time of contention between pagans and Christians, and one of the battlefields was the problem of miracles. Pagans (such as Celsus) not only expressed skepticism that Christian miracles were a sign from God, but also were more generally skeptical that the events actually occurred at all (ie, that they were poorly justified and highly improbable). Celsus claimed that in many cases, witnesses might mistake a natural state of affairs for a miracle, as in the case of the alleged raising of the girl from the dead by Asclepiades. And even if miracles indeed took place, they would not be different from pagan wonders, such as those performed by Apollonius of Tyana.^{12,13}

The Patristic Period: St. Augustine’s Subjective Account of Miracles and the Educational Function of Miracles

Augustine of Hippo (354–430) was the first to take the miracle as a subject of his studies.** He defined the miracle as “whatever appears that is difficult or unusual beyond the hope and power of them who wonder”.¹⁵ Augustine believed that miracles do not differ essentially from natural events; however, they attract more human attention because they are beyond man’s expectations. Miracles were not considered as greater than other natural phenomena. Raising the dead was not greater than conceiving and raising a child, and the multiplication of the loaves was not a more important miracle than everyday corn-growing to provide bread. As for miracles, Augustine emphasized their psychological aspect, the moment of astonishment, which would be the one that directs human attention toward God. He did not claim that miracles were contrary to nature but only to what we know about nature. This does not mean that he did not ascribe miracles to God’s activity. On the contrary, he maintained that everything in the world, natural events as well as miracles, were the work of God.^{††} He also emphasized that miracles would al-

**St. Augustine wrote on the subject of miracles throughout his life. Thus, many writings (*Of True Religion*, *On the Profit of Believing*, *Tractates on the Gospel of John*, *The Trinity*, *The City of God*) contain his reflections on the issue and are the subject of many different interpretations. In the first period of his activity, St. Augustine did not pay much attention to miracles. He maintained that miracles were useful only at the beginning of Christianity when they could demonstrate the truth of Church teaching. Later on, St. Augustine modified his views. It was after the graves of Saints Peter, Protasius, and Gervasius had been discovered and after some miracles happened there. St. Augustine started to send sick worshippers to those places. He also noticed that people were curious to know about miracles, and that stories about miraculous events stimulated worshippers’ faith. Thus, he ordered to record miracles in *Libri miraculorum*. (This is still practiced in Catholic sanctuaries today.)¹⁴

††Such an approach to miracles was an effect of St. Augustine’s understanding of the world and nature. According to him, while creating the world, God included *rationes seminales*. *Rationes seminales* are mysterious germs, potentialities of every entity and event in the world, which are

ways be a mystery, arguing not only that they were beyond our poor knowledge about nature, but also that they were the works of an inconceivable God.^{12,14}

At the time of the great migration of nations, cultural decay, and the decline of ancient philosophy, the view on miracles became more practical than theoretical. It was a period of moral crisis, so the activity of thinkers concentrated on improving religious and moral life. They did not analyze the essence of miracles or the possibility of their recognition, but they emphasized their educational function. Miracles warned, admonished, punished, and encouraged, as one of the Church Fathers Pope Gregory the Great (540–604) taught.¹⁴

II. Middle Ages

In the Middle Ages, the subject of miracles was taken up both in the Christian and Arabic worlds. Arabic thinkers (Avicenna, Averroes) were quite skeptical about the possibility of recognizing miracles and thus justifying religious beliefs by reference to miracles. They claimed that we could not prove supernatural truths using natural arguments. Such arguments could only serve as a kind of encouragement for simple and ignorant people to lead a good and moral life. Moses Maimonides, a Jewish physician and philosopher, acknowledged the realm of Biblical miracles and tried to reconcile the scientific and religious approaches, claiming that miracles were not contrary to nature but encoded in it and activated at the moment God desired them to happen.¹⁷

Early Middle Ages: “Miracle Plays” and the Beginning of Scholasticism

In Christian Medieval Europe, miracles were initially related to the cult of Virgin Mary and the Saints.^{‡‡} In time, miracles became an important element of social life. Hagiography (the stories of the Saints) and folk shows (so called “miracle plays”), which described an abundance of different miracles, were very popular, especially between the 11th and 13th centuries. The result was a social consciousness in which miracles were no longer related to the religious context but became a kind of entertainment or curiosity.

Facing the diminishment of the religious importance of miracles, the first representatives of the developing scholasticism undertook to deepen the reflection on the nature of miracles. They distinguished between the *miraculum*, under-

realized at the time God wants them to. Then they develop themselves in an autonomous way. Miracles are also included in similar germs, so called *semina miraculorum*.¹⁶

‡‡Initially, among many patron saints of the sick, the most famous were St. Lucas, St. Cosma, and St. Damian (the most famous sanctuaries of the latter two were in Constantinople). In time, the number of patron saints which were considered to help the sick was increased. The sick requested intercession of different saints depending on the type of sickness, so they asked St. Roch to cure plagues and St. Blaise to cure upper respiratory tract diseases. One of the greatest thaumaturges of the Middle Ages was St. Anthony of Padua, while St. Francis of Assisi was the first confirmed stigmatic in history.

stood as God’s work, and the *mirabile*, conceived as an exceptional, curious event that could be the work of a demon, magician, or trickster, but not God. Since that time, the procedures of proving whether or not an event was a miracle in the process of canonization have been made stricter.¹⁴

The concept of laws of nature became more and more important in the philosophical reflection on miracles. This initiated the interpretation of miracles as contrary to laws of nature.^{§§} The transition from the subjective approach to the objective approach can be noted: the extraordinary character of miracles did not result from them exceeding human expectations or from their curiosity, but from being contrary to objective natural laws. This approach had a great impact on subsequent disputes on the nature of miracles.

13th Century: St. Thomas Aquinas and His Objective Account of Miracles

Thomas Aquinas (1225–1274), in his studies on miracles, shifted the emphasis from the subject and the cognitive abilities of the subject onto the miracles themselves, which were manifested by an objective empirical event. According to St. Thomas, “Those events then are properly to be styled miracles, which happen by divine power beyond the order commonly observed in nature” (*Summa Contra Gentiles*, 3.101).¹⁷ Thus, the cause of the miracle is external to the world; it surpasses nature, and therefore can only be attributed to God. He is the Lord of all the laws of nature—he can suspend them or use them to reach his aims.^{|||} Thomas was also the author of the comparison of a miracle as a confirmation of God’s will to a royal seal that confirms the king’s will. (This comparison can also be found today in the procedures of the Congregation for the Causes of Saints in the Catholic Church, when proving the sanctity of the candidates to be canonized).¹⁹

Apart from scholasticism’s interpreting miracles in the rational and objective way, there were also contrary opinions on the matter, eg, Duns Scotus, who emphasized the role of

§§The change of conceiving miracles and their relation to the laws of nature had an evolutionary character. St. Anselm of Canterbury (12th century) distinguished natural and supernatural causes. Wilhelm of Overnia (13th century) emphasized two aspects that can be distinguished in the concept of miracle, namely, miracle’s divine genesis and contrariety to powers of nature. Alexander of Hales (13th century) was one of the first thinkers who called the miracle as the fact *contra naturam*.¹⁴

|||Thomas Aquinas distinguished three types of miracles: “Miracles of the highest rank are those in which something is done by God that nature can never do. Miracles of the second rank are those in which God does something that nature can do, but not in that sequence and connexion. Thus, it is a work of nature that an animal should live, see and walk: but that it should live after death, see after blindness, walk after lameness, these things nature is powerless to effect, but God sometimes brings them about miraculously. A miracle of the third rank is something done by God, which is usually done by the operation of nature, but is done in this case without the working of natural principles, as when one is cured by divine power of a fever, in itself naturally curable, or when it rains without any working of the elements” (*Summa Contra Gentiles*, 3.101).¹⁸

faith in the recognition of miracles and who objected to the view that miracles could function as a proof of religious truths.¹⁴

III. Modern Times

In the modern period, belief in miracles was still related to the cult of the Virgin Mary and the Saints.¹⁵ In the Renaissance, faith in the miraculous nature of the touch of kings also revived, especially in England and France.^{24###}

The modern period was a period of differentiation of the approaches to miracles. That differentiation was due to the emergence of the Protestant Church, as well as to some modern philosophical currents and the development of the empirical sciences. Since then, 17th century skepticism regarding belief in miracles has grown considerably.

16th and 17th Centuries: Reformation, Pascal's Chiaroscuro, and Spinoza's Divine Laws of Nature

The originator of the Reformation, Martin Luther (1483–1546), made the approach to the miracle essentially subjective. His intention was to give up the Thomistic objective conception of miracles, including its demonstrative function, and to grant them a subjective and religious meaning. He also resisted focusing on the aspect of curiosity in miraculous events and promoted the “miracle of faith,” without which all other miracles were insignificant. The consequence of this view was that Protestant theologians did not explore the issue of miracles for a long time.^{12,14}

One of the thinkers who tried to oppose the rising skepticism in regard to miracles was Blaise Pascal (1623–1662). He suggested conceiving of miracles not as a kind of evidence but rather as a sign from God. According to him, miracles were clear enough to those who chose to believe and too obscure to those who did not choose to believe. The acceptance or rejection of miracles depended on a more general attitude toward God and the subject's openness to the truth.²⁵

Baruch Spinoza (1632–1677) thought that laws of nature

were unchangeable and that they functioned without exceptions. Thus, miracles understood as a violation of the laws of nature were simply out of the question. According to Spinoza, there was no real difference between God and the world and so speaking of God's entering into the world through miracles would be illogical. One can speak of a “miracle” only as a fact, the causes of which one cannot recognize or relate to already known phenomena.²⁶

18th Century: Hume's Critics and the Idle God of Deists

At first, empiricism, which emerged in the 17th century England, did not oppose miracles: if well-confirmed, miracles could support the religion and be recognized as a sign of God (John Locke).^{12,27} Later on, empiricists became more skeptical due to the significant influence of David Hume's critique of miracles.

David Hume (1711–1776) thought that the invariability of the laws of nature and weak human evidence spoke against miracles. He presented two definitions of a miracle: “a transgression of a law of nature by a particular volition of the deity, or by the interposition of some invisible agent” and “a violation of the laws of nature”.²² From the latter, he brought out his famous argument against miracles***: “and as a firm and unalterable experience has established these laws, the proof against a miracle, from the very nature of the fact, is as entire as any argument from experience can possibly be imagined”.²² Thus, proving the reality of miracles would have to contradict the human experience that offered us understanding of the laws of nature.^{†††}

Among those who completely rejected the existence of miracles were representatives of 18th century deism (eg, John Toland, Benjamin Franklin). According to this view, the immutability of the laws of nature excludes the possibility of God's intervention in the natural world. The deists conceived of God only as the creator of the world, who no longer interfered with the world's history after He had created it.^{29†††}

Having analyzed the concept of miracles as events that suspend powers of nature or are contrary to them, Immanuel

¹⁴In the 17th century (1640 AD), one of the most amazing miracles (the so-called *Gran Milagro*) in history took place near Saragossa in Spain. In a single night, Miguel Juan Pellicer got back his limb, which had been amputated two years earlier. The fact was confirmed by many witnesses (inhabitants of both his home village and Saragossa, who knew Miguel as the beggar with the amputated limb, as well as by the physicians who had amputated Miguel's leg), and the investigation of the reality of the miracle was conducted according to the highest standards of the time. During the evidencing process, king's notaries public and professors of law were all present. What is more, priests from the sanctuary in Saragossa were excluded from participation in the process in order to remove the objection that they wanted to reinforce the cult in their church.^{20,21} The miracle was recalled by D. Hume and recently was popularized by V. Mesori.^{22,23}

^{###}The belief in kings' healing powers resulted from the belief in the divine origin of sovereigns. Ceremonies in which kings put their hands on sick people were held. The French and English courts especially tried to maintain the tradition. Despite the Reformation in England and French Revolution interrupting those rituals, they occurred occasionally even into the 19th century.²⁴

^{***}Hume gave more reasons for the weakness of human testimonies about miracles, such as unreliability of witnesses; the fact that miracles were more common among primitive nations than among civilized ones; and the human tendency to look for curiosity and wonder, which can entail credulity. However, at the end of the chapter “On Miracles,” he stated that faith gave people power to believe in things that are against experience.²²

^{†††}C.S. Lewis analyzing the Humean critique of miracles wrote: “we know the experience against them [miracles] to be uniform only if we know that all the reports of them are false. And we can know all the reports to be false only if we know already that miracles have never occurred. In fact, we are arguing in a circle” (*Miracles*, p. 123).²⁸

^{††††}In the 19th century, Feuerbach criticized deists for their inconsequence in conceiving of miracles and God. According to him, a God who was not able to perform miracles would not be God at all because it would limit his omnipotence. And if the miracle really happened, it would serve as an evidence of the existence of God.³⁵

Kant (1724–1804) stated that in nature, one could not notice activities opposing it or suspending its powers. Everything happens in accordance with the chain of causes. Kant suggested that such a belief, being contradictory to our experience, would be purposeless. Besides, we do not need to believe in miracles to recognize God. The confirmation of God's existence is based on moral law and the harmony of the world.³⁰

19th Century: Cult of Science, Table Tipping, Atheism, and Lourdes

The 19th century was a period of contradictions: on one hand it is the time of positivism, scientism, forms of Biblical study interpreting the Jewish and Christian scriptures as myths, and atheistic materialism; on the other hand, it is also the time of flourishing of mesmerism, spiritualism, séances, and table tipping. It was also a century of Marian revelations: Paris (1830), La Salette (1848), Lourdes (1858). In addition, Lourdes became the site of many unexplained healings, and the most important pilgrimage center for the sick.^{31,32§§§}

One of the thinkers who tried to reconcile modern science with faith was F.D.E. Schleiermacher (1768–1834). He thought that the only real miracle was the sustaining of the world's existence by God. Other miracles were only religious terms for extraordinary events.^{12,14}

Positivism, in turn, viewed belief in miracles as only a vestige of an earlier phase of mental development of humanity, namely the theological phase from which humanity had shifted. The new phase was one of scientific and social development based on positive philosophy, appealing exclusively to empirical facts. Ludwig Feuerbach (1804–1872) rejected the existence of God and miracles. He thought that God and miracles were a kind of objectified projection of human desires, eg, the desire to regain health.³⁵ David Friedrich Strauss (1808–1874), developing a mythological interpretation of the Bible and denying the divinity of Jesus, undermined the Biblical miracles by conceiving of them as mythological images produced by the consciousness of primitive people and tried to explain them in a naturalistic way.^{12,36}

In the 19th century, there were some thinkers who de-

fended the possibility of miracles. Some of them tried to conceive of miracles independent of the laws of nature: Cardinal John Henry Newman put the emphasis on the aim, not the cause, while Maurice Blondel conceived of miracles as signs from God.^{15,31}

At the end of the 19th century, the First Vatican Council (1869-1870) condemned statements denying God's ability to work miracles.^{37||||}

20th Century: The Quantum Revolution and Symbolic Accounts of Miracles

The quantum revolution in physics in the first part of the 20th century caused some empirical scientists and theologians to start pointing out that neither probabilistic nor statistical physical laws exclude miracles, for they could be statistically very rare phenomena which could neither be confirmed nor excluded using modern scientific methods. On the other hand, some thinkers claimed that the natural causal chain did not allow miracles (conceived as an interference of the supernatural cause into nature) to happen. The miracle could be treated only as a subjective human experience.^{12,38}

In the first half of the 20th century, C.S. Pierce and A.N. Whitehead granted the philosophical foundations of indeterminist understanding of nature and its laws. They conceived of the world as creative and developing. Miracles that take place in the dynamic and undetermined world do not have to be understood as a disturbance of the immutable laws of nature (some noticed that this concept is inherently contradictory).^{¶¶¶} Thus, they can both be God's signs and the manifestations of the creative power of nature.⁴⁰

Miracle is a subject of study for process philosophers (eg, Ch. Hartshorne), as well some analytical philosophers (eg, R. Swinburne). Their analyses demonstrate that the denial of the existence of miracles is the consequence of some metaphysical presuppositions and not of the scientific data.^{41,42}

The development of existentialism, phenomenology, and personalism caused some changes in the theological attitude. Many Protestant and Catholic theologians after the Second Vatican Council (1962–1965) started to develop the interpretation of the miracle as a sign. In light of this interpretation, the essence of miracle is a message from God to man, and not the empirical element that is only the carrier of this content. Faith allows us to recognize and respond in the right way to

§§§ More than 100 years ago, the Bureau Medical was established in order to gather and document evidence of those healings. The Catholic Church has officially confirmed as true 67 out of 7000 unexplained healings reported to the Bureau Medical over the last 100 years. The list of these healings is available on the official sanctuary website (www.lourdes-france.org/upload/pdf/gb_guerisons.pdf, 2007-03-04). The scientists' attitude to Lourdes was diverse: many tried to ignore information about miracles, some criticized it and tried to find a naturalistic explanation for events that occurred there (for example, J.M. Charcot, the famous French neurologist, believed that those healings were the effect of suggestion; however, he had never been to Lourdes), or some acknowledge the mysterious character of the place.³² A. Carrel (1873-1944), the Nobel Prize laureate (1912), as a young physician traveled to Lourdes with a group of sick people and saw the wonderful and inexplicable recovery of one of his patients. The book *Voyage to Lourdes* contains his reflections about this journey.^{33,34}

||||“If anyone says that all miracles are impossible, and that therefore all reports of them, even those contained in Sacred Scripture, are to be set aside as fables or myths; or that miracles can never be known with certainty, nor can the divine origin of the Christian religion be proved from them: let him be anathema” (Canons 3.4 of *Dei Filius*).³⁷

¶¶¶ A. McKinnon claimed that the concept of the miracle, understood as a violation of laws of nature, is self-contradictory. A law of nature is simply “the actual course of events.” There can be no actual event that suspends the actual course of events. If one wants to maintain the historicity of an event that violates the assumed law of nature, one must admit that the alleged law of nature is erroneous.³⁹

a sign (miracle); without faith, we can treat it only as a rare and inexplicable phenomenon.^{14,43}

Despite many skeptical arguments, a great majority in modern Western societies (including physicians) share a belief in miracles.^{44–46###} The last official confirmation of inexplicable healing in Lourdes occurred in 2005. The Vatican Congregation for the Causes of Saints proclaimed 347 decrees about miracles between 1983 and 2004.⁴⁷ We can witness the development of the cult of Father Pio (the most famous contemporary thaumaturge and stigmatist) in Catholic countries and the popularity of pilgrimages to Medjugorje (Croatia, site of Marian appearance since 1981) and Lourdes (France).

The belief in mysterious powers that could influence nature and human life is present also in New Age literature. It refers to the concepts of mind healing and cosmic energy.

Summary

Different approaches to miracles are a consequence of differences in understanding nature and God. If one conceives of nature as a deterministic system and denies the existence of God or thinks He is very distant, usually there is no space left for miracles at all. If one conceives of laws of nature as relative and God as transcendent, but caring and benevolent, usually one believes in miracles and tries to explain their characteristics.

Most theoretical disputes on the possibility of miracles concentrate on the concept of a miracle conceived as contrary to laws of nature (an event that is *contra naturam*); conceiving of miracles as signs, manifestations of nature's powers at God's command, or a subjective experience is not so controversial.

Besides many theoretical studies on miracles, there have still been a few attempts to describe miraculous phenomena (especially miraculous healings) in a way that is systematic, empirical, and not limited by aprioristic assumptions (apologetic or skeptical). There are no profound studies on the circumstances that support the occurrence of the sudden and unexplained healings. Such retrospective studies on the people who experienced miraculous healings could be an interesting field for scientists of many different disciplines, independent of the theoretical discussion over the essence of miracles themselves.

At the beginning of the 21st century, we have still many questions which have not been answered. What is the essence

of miracles? Are miracles mere effects of our limited cognitive abilities? Or are they signs of outer reality? Does faith "create" miracles or simply allow their recognition? What is the cause of the fact that some people experience miraculous healings and others do not? Still, for patients, the most important question is how to experience miraculous healing when medicine can no longer help. That is why they believe and pray.

Acknowledgments

Dr. Pawlikowski gives acknowledgments to Professor Krzysztof Marczewski for his encouragement and support to study medicine/religion relationships and to Ms. Karolina Sekula, DPhil, for important remarks and help.

References

1. Craig E. *A Routledge Encyclopedia of Philosophy*. London/New York, A Routledge, 1988.
2. Blackburn S. *The Oxford Dictionary of Philosophy*. Oxford, New York, Oxford University Press, 1996.
3. Levine M. Miracles. In: Zalta EN, ed. *Stanford Encyclopedia of Philosophy*. Stanford, Calif, Stanford Online Media, 2002. Available at <http://plato.stanford.edu/entries/miracles/>. Accessed October 1, 2007.
4. Cotter W. Miracles in Greco-Roman Antiquity. A Sourcebook. London, Routledge Taylor & Francis Group, 1999.
5. MacDonald AH. Herodotus on the Miraculous. In: Moule CFD, ed. *Miracles. Cambridge Studies in Their Philosophy and History*. London, AR Mowbray & Co Ltd, 1965, pp 81–92.
6. Euripides, *Alcestis*. Dale AM, ed. Oxford, New York, Clarendon Press, 1978.
7. Philostratus: *The Life of Apollonius of Tyana*. London, Hainemann, 1912.
8. Kee H. *Miracle in the Early Christian World: A Study in Socio-Historical Method*. New Haven/London, Yale University Press, 1983, p 89.
9. Lindars B. Elijah, Elisha and the Gospel Miracles. In: Moule CFD, ed. *Miracles. Cambridge Studies in Their Philosophy and History*. London, AR Mowbray & Co Ltd, 1965, pp 61–80.
10. Moule CFD. The vocabulary of miracle. In: Moule CFD *Miracles. Cambridge Studies in Their Philosophy and History*. London, AR Mowbray & Co Ltd, 1965, pp 235–238.
11. Ross JP. Some notes on miracle in the Old Testament. In: Moule CFD *Miracles. Cambridge Studies in Their Philosophy and History*. London, AR Mowbray & Co Ltd, 1965, pp 43–60.
12. Brown C. *Miracles and the Critical Mind*. Grand Rapids, Mich, William B. Eerdmans Publishing Company, 1984.
13. Lampe GWH. Miracles and early christian apologetics. In: Moule CFD *Miracles. Cambridge Studies in Their Philosophy and History*. London, AR Mowbray & Co Ltd, 1965, pp 203–218.
14. Rusecki M. *Cud w chrześcijaństwie [Miracle in Christianity]*. Lublin, TN KUL, 1996.
15. Augustine: On the Profit of Believing. In: Schaff P, ed. *A Select Library of the Nicene and Post-Nicene Fathers*. Grand Rapids, Mich, Wm. B. Eerdmans, 1956, p 34.
16. *Augustine: The City of God*. tr. Wiesen DS. London, Heinemann, 1958, 21.7; 22.8–10.
17. Langermann YT. Maimonides and miracles: The growth of a (dis)belief. *Jewish History*. 2004;18:147–172.

###According to the results of a survey of HCD Research and the Louis Finkelstein Institute for Religious and Social Studies of The Jewish Theological Seminary in New York City (2004), 73% of American physicians believe that miracles are possible.⁴⁴ However, it is difficult to determine how respondents understood miracles, as it was not defined in the survey. According to research conducted among physicians and students of medicine in Poland, a similar percentage of respondents (about 70%) believe in miracles defined as supernatural phenomena which are caused by God.^{45,46}

18. Aquinas Thomas: *Summa Contra Gentiles*. tr. Rickaby J. London, Burns & Oates-B. Herder, 1905, 3.99–105.
19. Woodward K. *Making Saints: How the Catholic Church Determines Who Becomes a Saint, Who Doesn't, and Why*. New York, Touchstone, 1996, pp 191–220.
20. Estella Zalaya E. *El Milagro de Calanda*. Estudio historico critico. Zaragoza 1951.
21. Sureda Blanes F. *El Milagro*. Exclusivas editorial voluntad Madrid, SA, 1928.
22. Hume D. *Enquiries Concerning Human Understanding*. Oxford, Oxford University Press, 1975, pp 109–131.
23. Messori V. *Il miracolo: Spagna 1640: indagine sul piuu sconvolgente prodigio mariano*. Milano, Rizzoli, 1999.
24. Bloch M. *The royal touch: sacred monarchy and scrofula in England and France*. tr. by Anderson JE. London, Routledge & K. Paul, 1973.
25. Pascal B. *Thoughts*. Garden City, NY, Doubleday, 1961, 13:803–856.
26. Spinoza B. *Tractatus Theologico-Politicus*. In: *The Chief Works of Benedict de Spinoza*. Tr Elwes RHM. New York, Dover Publications, 1955, 6:1–134.
27. Lock J. *A Discourse of Miracles*. In: *The Workes of John Locke*. 10 vols. London, 1823, 9:256–265.
28. Lewis CS. *Miracles. A Preliminary Study*. New York, The MacMillan Company, 1947, pp 121–130.
29. Toland J. *Christianity Not Mysterious*. New York, Garland Pub, 1978.
30. Kant I. *Religion Within the Limits of Reason Alone*. Tr. Greene TM, Hudon H. New York, Harper, 1960, pp 80–85.
31. Mullin RB. *Miracles and Modern Religious Imagination*. New Haven/ London, Yale University Press, 1996, pp 119–137.
32. Bon H, Leuret F. *Las curaciones milagrosas modernas*. Madrid, Ediciones Fax, 1953.
33. Carrell A. *Voyage to Lourdes*. Michigan, Real View Books, 1994.
34. Jaki SL. *Two Lourdes Miracles and a Nobel Laureate: What Really Happened? Catholic Medical Association*, 1999. Available at: http://www.cathmed.org/publications/lq_1998_02.htm. Accessed October 1, 2007.
35. Feuerbach L. *The Essence of Christianity*. New York, Harper, 1957, pp XII–XIII.
36. Craig WL. The problem of miracles: A historical and philosophical perspective. In: Wenham D, Blomberg C. *Gospel Perspectives VI*. Sheffield, UK, JSOT Press, 1986, pp 9–40.
37. *Dogmatic Constitution Dei Filius on the Catholic Faith. First Vatican Council*. 1870. Canon 3.4. Available at: www.ewtn.com/library/COUNCILS/V1.HTM. Accessed October 1, 2007.
38. Anderwald A. *Nauki przyrodnicze w procesie rozpoznania cudu. [Natural Sciences in the Process of Recognition of Miracle]*. Opole, WTUO, 1997, pp 91–189.
39. McKinnon A. “Miracle” and “Paradox.” *Am Philosophical Q* 1967;4: 308–314.
40. Stempsey WE. Miracles and the limits of medical knowledge. *Med Health Care Philosophy* 2002;5:1–9.
41. Hartshorne C. A reply to my critics. In: Hahn LE, ed. *The Philosophy of Charles Hartshorne*. La Salle, Open Court, 1991, pp 569–731.
42. Swinburne R. *The Concept of Miracle*. New York, St. Martin's Press, 1970.
43. Berger K. *Darf man an Wunder glauben?* Gütersloh, Gütersloher Verl.-Haus, 1999.
44. Kirschenbaum S. *Science or Miracle*. Available at: <http://www.hcdi.net/News/PressRelease.cfm?ID=47>. Accessed October 1, 2007.
45. Pawlikowski J, Sak J, Marczewski K. The belief in miracles among students of medicine. *Ann UMCS Sect.D Med* 2006;61:373–379.
46. Pawlikowski J, Monist M, Sak J, Przygoda-Dreher A, Marczewski K. Medical students' opinion on the religious beliefs in professional doctors' work. *Ann UMCS Sect D Med* 2006;61:380–388.
47. Bar W, Blicharz D. Charakterystyka cudów do beatyfikacji i kanonizacji uznanych po reformie prawa kanonizacyjnego w 1983 roku. [The Characterization of Miracles Confirmed in Beatifications and Canonizations Processes after the reform of the Canonization Law in 1983 year]. In: Bar W, ed. *Cuda w sprawach kanonizacyjnych [Miracles in Canonizations Processes]*. Lublin, WDS, 2006, pp 153–206.

Simplicity is the ultimate sophistication.

—Leonardo da Vinci