

## THE MIRACLE OF THE BLACK LEG: EASTERN NEGLECT OF WESTERN ADDITION TO THE HAGIOGRAPHY OF SAINTS COSMAS AND DAMIAN

### ČUDO CRNE NOGE: ISTOČNJAČKO ZANEMARIVANJE ZAPADANJAČKIH PRINOSA HAGIOGRAFIJI SVETIH KUZME I DAMJANA

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#### SUMMARY

*The Christian miracle tales strongly support the identification of Sts. Cosmas and Damian as doctors. The most famous of the saints' posthumous miracles, is that of the Black Leg. The main source of this story is the Golden Legend by Jacobus da Varagine, collection of fanciful hagiographies compiled in the 13<sup>th</sup> century. Saints Cosmas and Damian miraculously transplanted the black leg of the Ethiopian man onto the white body of the verger with "cancerous" leg. Saints appeared to the patient in a dream, amputated his diseased leg and replaced it with the leg of a recently died man. This dramatic cure was attractive for many western artists. The iconography of this miracle was depicted for the first time in a Florentine panel of ca.1370. The color of the leg later attracted special attention. Since the 1990's the Miracle of the Black Leg, presented in a (neo) Byzantine style, appeared in Greece. The miracle of Holy Unmercenaries has no proper historical foundation in the Books of the lives of the Saints in the Orthodox Churches. Action focused on replacement of the affected leg with one from cadaveric donor was unknown to the eastern Christianity. Exploration of*

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available orthodox hagiographical sources related to the healing powers of Sts. Cosmas and Damian showed remarkable neglect of that miracle. Some contemporary Greek authors find appropriate to disregard it.

**Key words:** Miracle of the Black Leg; Sts. Cosmas and Damian; Greece

## SAINTS COSMAS AND DAMIAN

Cosmas and Damian, the patron saints of medicine, were twin brothers, born in the third century in the small city of Aegea, in the district of Cilicia (between Turkey and Syria), an Arabic province of the Roman Empire. Cosmas and Damian were Christians and both studied medicine in Antioch and practiced in their community. The brothers had healing powers and cured both humans and animals. They refused to be rewarded for their medical service and worked for no fee – Unmercenaries /Anargyri (Greek- without silver money) [1]. Their faith in God helped them perform miracles. Under the reign of the emperor Diocletian (AD 284-305), they were forced to reject their faith; and they were condemned, tortured and beheaded. Their bodies were taken to Cyrrhus in the northern Syria and were buried at the site of an ancient temple dedicated to the Greek god Asklepios where the priests treated patients by incubation [2-4]. Under the patronage of Justinian and Theodosius II, their cult in the West expanded quickly from the Byzantine Empire, passing through the entire European continent. It arrived to Rome in the 4th century, where a church in the Forum was dedicated to them [5]. During the Middle Ages, their remains were dispersed and their cult spread widely and rapidly through Europe, including Slavic countries and obscuring its historic origins with myth. Cosmas and Damian were particularly honored in Florence by the Medici family [4].

The three pairs of martyrs, called Cosmas and Damian are described in the *Basilian Menology* and the *Sirmondian Codex*. The *Synaxarium Ecclesiae Constantinopolitanae* is dependent on the Sirmondian codex and represents the conclusion of the evolution of the legends. Lives of these three groups of Saints are summarized in that Synaxare [6]. The Byzantine Church proclaimed three copies of the twin saints and codified the multiple cults and feasts [4,7,8].

The first pair of saints was the sons of Theodote, a pious woman from Asia Minor, who died in peace. They were buried in a place called Phereman in Mesopotamia. They are celebrated on November 1. The second pair lived in Rome and were martyred under the Emperor Carinus (AD 283-284). After

having suffered many torments, their miraculous actions converted the emperor and his court to Christianity. Struck by envy, their master lured them to a hill under the pretext of collecting herbs and stoned them to death. They are celebrated on July 1. The final pair of brothers, honored on October 17, was from Arabia. They cured many people, but were arrested during the reign of the emperor Diocletian in Cilicia. They were brought before Lysias, governor of the city of Aegea and confessed their faith. Condemned to death, Cosmas and Damian were subjected to all kinds of tortures, moral and physical. Neither the attempts to drown the brothers, nor burn them, tore them apart, nor crucify them or lapidate them had any effect. Their martyrdom was in 287 AD and they were finally beheaded along with younger brothers Anthimus, Leontius and Euprepus [1,4, 9].

Cosmas and Damian were considered patron saints of doctors, surgeons and pharmacists, by the Church, by the medical profession and in popular belief. They were also the patron saints of hospitals and many brotherhoods were created under their auspice. The iconography of the saints Cosmas and Damian appear in a wide variety of artistic manifestations: paintings, sculptures, manuscripts, illumination, stained-glass and sumptuary objects. In the East, the Holy Unmercenaries were usually represented in icons, vested as laymen holding medicine boxes.

### THE MIRACLE OF THE BLACK LEG

The tales in the miracles strongly support the identification of two Christian brothers, Cosmas and Damian as doctors. Even after their death, they performed miracles [2]. One of their most famous miracles is a surgical operation, known as “The Miracle of the Moor’s (Black) leg”. It was supposedly performed by Sts. Cosmas and Damian, after their martyrdom. The main source of this story is the Golden Legend (*Legenda Aurea*) by Jacobus da Varagine (Jacopo da Varagine), Archbishop of Genoa. This collection of fanciful hagiographies was probably compiled around 1275 and became some kind of late medieval bestseller [10, 11, 12] (Figure 1).

The miracle is described as follows:

*Pope Felix built a noble church in Rome in honor of Saints Cosmas and Damian. In his church there was a man, a devoted servant of the holy martyrs. One of the man’s legs was totally consumed by cancer. While he was asleep, the two saints appeared to their devoted servant, bringing surgical instruments. One of them said to the other: “Where can we get flesh to fill*



Figure 1 - Anonymous, illustration in manuscript, *Legenda aurea*, 13<sup>th</sup> century, Henry Huntington Library, San Marino (USA)

*They send at once to the Moor's tomb, and found that his leg has indeed been cut off and the aforesaid man's limb put its place in the tomb [12].*

Previous version of the lives of Sts. Cosmas and Damian included the miracle of Palladia and the stories of the peasant and the snake and Malchus's wife. The most significant difference was the inclusion of the miracle of the Black Leg, which was not found in the ninth century manuscripts, but appeared in almost all versions of the life from this period on [4,13]. This miracle, set in Rome, was the most distinctive and popular Latin miracle of the doctor saints from the medieval period onward. It is one of the three miracles performed by the twin brothers after their deaths.

The verger had diseased leg and he was near death. He addressed a fervid prayer to his patrons and fell asleep in the church. The Saints appeared to him in a dream, carrying their instruments. They amputated his leg, replacing it with the leg of a Moor who had recently died. Cosmas and Damian opened his grave, cut off his leg and attached it to the stump of the servant

in when we cut away the rotted leg?" The other said: "Just today an Ethiopian was buried in the cemetery of St Peter in Chains. Go and take his leg, and we'll put in place of the bad one". So he sped to the cemetery and brought back the Moor's leg, and the two saints cut off the sick man's leg and inserted the Moor's in its place. Finally they took the amputated leg and attached it to the body of the dead Moor. The man woke up, felt no pain, put his hand to his leg, and detected no lesion. He held a candle to the leg and could see nothing wrong with it, and began to wonder whether he was himself or somebody else. Then he came to his senses and told everyone about what he had seen in his dreams and how he had been healed.

[14]. The verger's friends, who did not believe that a miracle had taken place, went to the cemetery of St Peter in Chains (quoted as S. Peter ad Vincula in some versions) [4,16] where the recently deceased Ethiopian or Moorish man had been buried. They saw that he had received the diseased leg at the precise spot where the black leg had been amputated [4,12].

The iconography of the Miracle of the Black Leg was depicted in a Florentine panel of ca.1370 for the first time, dedicated to Sts. Cosmas and Damian and attributed to the master of the Rinuccini Chapel (or Matteo di Pacino)1350-1375. This work is in the North Carolina Museum of Art, Raleigh, USA [13,15]. The predella contains two scenes from the Life of Sts. Cosmas and Damian: the *Martyrdom of Saints* and the posthumous *Miracle of the Black Leg*. The final scene of the miracle describes the happy end of that strange operation. When the verger awoke, he was astonished: his leg was healthy and without lesion, but it was black. A healed verger with a mobile black leg expressed his gratitude to the twin Saints, while they observed him with "professional" pleasure [10,14,16] (Figure 2). This depiction became one of the most popular and most easily identifiable of the miracles in the western European painting [4]. Based on the investigation conducted by the pharmaceutical company "Pfizer" for the journal *Spectrum*, over 1500 paintings depict this event in various churches and museums [17, 18].



Figure 2 - Master of the Rinuccini Chapel (Matteo di Pacino), panel (predella scene) (1370-1375), North Carolina Museum of Art, Raleigh NC (USA)

The Greek legend of Cosmas and Damian is the oldest known version, written in the fifth century. In that source, the ethnicity of the donor is not specified and the Miracle of the Holy Anargyri (they who decline silver)

takes place in the church of St. Theodosios the Cenobiarch (423-590). In the Greek version this miracle is not posthumous. The man with the ulcerated leg lives in the region of Sebastia. The time of death of the donor is specified as a period of „four days“. Sts. Cosmas and Damian said to their patient after the operation: „Go, brother. The mighty works of God have been accomplished because your faith has saved you“[13,16]. The manuscript with this version archived in the Biblioteca Vallicelliana in Rome, was assigned to the 15<sup>th</sup> century .The Greek version, older than one in the Golden Legend, has been edited by Deubner [17]. Other Christian saints performed similar but less celebrated miracles. In the 13<sup>th</sup> century, Saint Anthony of Padua (1195–1231) was credited with reattaching a severed leg [4].

### NEW ELEMENTS IN THE MIRACLE

Representations of the miracle soon acquired new elements [20]. Other sources described deacon Justinian, instead of a guardian, who worked in the Basilica of Sts. Cosmas and Damian in Rome [21]. Usually, during the “operation” the verger is asleep; there is no trace of any pain. No blood flow and surgical instrument were absent [14]. The miracle of the black leg includes echoes of the practice of incubation, the traditional form of workshop practiced by the devotees of healing shrines and documented in ancient Greek Medicine [4, 21]. The basilica dedicated to the twin brothers in Constantinople was continuously surrounded by the patients that practiced the ritual of *incubatio*, which also took place in the temples dedicated to Aesculapius [5].

The Greek version concerned a man with a gangrenous right leg injured by a splinter [16, 17]. The Catalan version created by an anonymous author, appears to be especially imaginative and realistic. It does not concern a case of heterogeneous limb transplantation because only some flesh was cut from the dead Moor’s thigh by the Saints to fill the hole in the “cancerous” man’s leg. So, his leg was not amputated and replaced by the Moor’s leg [16].

The colour of the leg attracted special attention, sometimes with controversial meaning. The painting realized by the Spanish, Gothic painter Miquel Nadal (15<sup>th</sup> c.), is a different case where the transplanted leg is white. In the realization of the chapel of the Sts. Cosmas and Damian (1453-1455) in the Barcelona cathedral, Nadal corrected the color of the implanted leg. The black Moor’s leg was still “convenient” before the Spanish expulsion of the Moors in 1492 [20]. The reason could be that Nadal considered that



**Figure 3** - Miquel Nadal (ca.1419-1492), panel of altarpiece of Sts. Cosmas and Damian, (1453-1455), Catedral de la Santa Cruz y Santa Eulalia, Barcelona (Spain)

deacon Justinian would have suffered from serious psychological problems, exhibiting a double-colored leg and attracted unpleasant curiosity [15,21]. In the Greek legend of Cosmas and Damian, the ethnicity of the healthy donor is not specified. Both the recipient and the donor of the leg belonged to the same ethnic group. This legend seems to have inspired the Catalan panel [13] (Figure 3).

The absence of the Ethiopian „organ-donor“ in some Spanish pictures could be regarded as a reminder of the law ordering the expulsion of the Moors from the crowns of Castile and Leon [22]. In the sixteenth century, the black corpse was occasionally replaced by a living black person placed in the foreground, which is unique to the Spanish representations of the miracle in early modern Europe. Some of the examples are: the Chapel of St. Gregory in the cathedral of Palencia, and the cathedral of Avila (1534-1544) [22].

In a book “Inhuman Bondage”, as ambiguous example of the anti-black racism in the mid-sixteenth-century Spain, Davis [23] alleged a painting of the “Miracle of the Black Leg” attributed to Isidoro de Villoldo (cc.1547). This work on polychromed wood, is now placed in Museo Nacional de Escultura, in Valladolid, Spain [1]. The two Saints replaced the gangrenous leg of a white man with an amputated limb of a dying black man (“living



Figure 4 - Isidro Villoldo, (ca.1500-1556) Seville, panel, polychrome woodcarving, altarpiece for the S. Juana del Convento de S. Francisco (1539 or 1547), Museo Nacional de Escultura, Valladolid (Spain)

donor”), whose face was contorted with pain. The author stressed that dramatic depiction of alive black man contrasts markedly with the unconcerned expressions and attitudes of the holy physicians [23] (Figure 4).

#### THE DEPICTION OF THE MIRACLE OF THE BLACK LEG IN ORTHODOX ICONOGRAPHY

As already discussed, there are three pairs known by the same name and identified as Holy Unmercenaries and commemorated in the Byzantine calendar on July 1, October 17 and November 1 (Cosmas and Damian of Rome, of Arabia and of Asia Minor). The pair associated with the miracle of the black leg is the one celebrated on July 1 and known as “the Romans”. All three pairs of saints were rarely depicted in the same place, as in the wall-painting in the church dedicated to the Ascension of Lord Christ in the Serbian Dechani Monastery (1327-1335).

Since the 1990’s the icon-like representations of the Miracle of the Black Leg in a (neo) Byzantine style appeared in Greece. What makes this phenomenon so special and un-historical, is that the pictures of the black leg never occurred in this part of Europe. The specific detail of a black leg replacement was unseen in the Orthodox Church [4, 20]. The recent portrayals [1]



of this miracle of Sts. Cosmas and Damian in the Greek Orthodox iconography are based on the Western depictions. No similar examples in the Slavic orthodox countries were noted. The majority of illustrations of the miracle of the black leg are found in Spain (21), Italy (19) and France (14). Greece with 5 illustrations is the only orthodox country.

In some depictions of the miracle it is not always necessary to portray the transplantation of the leg as well. A patient lying in bed was presented, with both legs hidden from view, and Cosmas and Damian standing around the bed [1]. As an example for that, Zimmermann [1] quoted the illustration in a Greek manuscript, drawn by an anonymous author (11<sup>th</sup>-12<sup>th</sup> c.) and archived in the Treasures of the Greek/Russian monastery of Saint Panteleimon on Mount Athos in Greece. However, there was no convincing evidence for that. Cosmas and Damian are standing round the bed of a patient. If it is the portrayal of a cure, noting indicates that the leg was transplanted. Pelekanidis and al. [24] considered that four compositions of the miraculous recoveries presented in that illuminated Manuscript from 12<sup>th</sup> c.(Cod.2), advocated miracle healing powers of Sts. Anargyri. They listed healing of the disabled man, recovery of a man suffering from „water disease“ (probably ascites), miracle of the peasant who availed a snake and the famous episode with a woman Palladia. No miracle of the Black Leg was recognized [7, 24] (Figure 5).

In the Book *One Leg in the Grave Revisited*, that recently appeared [1], five pieces of art in Greece were listed. The icon painted in the 1993 in the monastery Agathonos in Fthiotida (Figure 6), frescoes of the churches dedicated to Sts. Anargyri in the cities of Veria (2000) and Thessaloniki (Figure



**Figure 5** - Anonymous, Healing powers of Sts. Cosmas and Damian Illustration in manuscript, 12th century. Greek/Russian monastery St. Panteleimon, Athos (Greece)



**Figure 6** - Vasilios S. Simons, icon, (1993), Agathonos Monastery, Fthiotida (Greece)

7), picture (2010) painted by F. Nicolaos and woodcarving (2011) created by M. Ioannis in the private collection in Chios are included. We could conclude that all Greek illustrations of the miracle of the black leg were painted in the modern Greece (after 1993).

The icon painted ca. 1600 by Emanuele Tzanfornaris (1570-1631), the painter from Crete (Greece), and found in Museo delle Icone (Hellenic Institute) in the Greek church of St. George in Venice in Italy (Chiesa di S. Giorgio dei Greci) was also listed [1]. The

central part of the icon is reserved for the holy brothers and entoured by eight compositions, depicting various miracles. In this icon the miraculous recoveries are portrayed apart from the miracle of the black leg. In one of these illustrations, Sts. Cosmas and Damian are standing round the bed. Although Tzanfournaris worked and lived in Venice at the time when he was familiar with the legend of the transplantation of the black leg, it is not strongly convincing that it is the illustration of the famous cure [7, 23].

The topic of Sts. *Unmercenaries* (*Anargyri*) Cosmas and Damian as the first surgeons that realized the successful grafting was the subject of numerous publications in modern Greece, including the books titled *Brain Death and Organ Transplantation* and *Church and Transplantation* [26,27]. Some faculties from Greek Universities stated that “legends, superstition and religious feelings should not be presented as scientific facts or events in the history of medicine” [17]. They stressed that all the texts are referenced only to in Western sources and the miracle that was not included in the Books of the lives of the Saints in the Orthodox Church in Greece should be disregarded [17, 27].

Famous, highly artistic, hagiographic icon of lives of Sts. Cosmas and Damian depicted in 1673/74 by the Serbian painter Radul, was dedicated to



**Figure 7** - Stavros Gospodinis, wall-painting (2001), Church Sts. Unmercenarys (Sts. Anargyri), Eptapyrgio, Thessaloniki (Greece)

the Asian twin brothers. It is archived in the treasure of the monastery of the Patriarchate of Pec. Despite being dated in the 17<sup>th</sup> c., this icon is considered to be the most extensive conserved cycle dedicated to the Holy Unmercenarys in the eastern Christian painting. The biographic presentation of Sts. Cosmas and Damian in this large icon (98,5—85,5 x 4 cm) was composed from 16 scenes. The Saints gave sight to the blind, healed the disabled and paralyzed man, expelled demons from the men and cured the lame. The miracle of the speaking camel was also depicted. The miraculous outing of the snake from the peasant's body and the protection of the Malchus's wife from the devil were also included [7, 8].

The Miracle of the black leg has no proper historical foundation in the Books of the lives of the Saints of the Serbian Orthodox Church [28]. The Saints Cosmas and Damian strictly followed the command of Lord to His disciples and apostles: "Freely have you received, freely give." (Matthew 10:8). Archimandrite Justin Popović described a list of miracles in detailed hagiography and lives of three pairs of Holy Unmercenarys and miracle workers: healing a gravely ill woman named Palladia, along with the story of three eggs given as a gift to Cosmas; a camel, which the Saints had treated

for its wildness, spoke with a human voice saying that the relics of the holy brothers should be buried together; the miraculous recovery of the peasant that the snake entered while asleep; and the episode of protection of the Malchus's wife from the temptation. Archimandrite praised their „healing powers for miraculous recoveries of both mental and physical diseases“ appearing for life and after death of the Holy physicians [28]. The same miracles were previously portrayed and described in many western books [2,4,18,19]. However, no any presentation of the miracle of the black leg was described in the writings or painted /illuminated nor found in any artifact, manuscript, icon or wall-painting in the Serbian Orthodox Church [8, 29].

Because of these facts, some eastern historians of medicine, mainly Greek authors, have called the miracle of the black leg a myth that should not be used in historical textbooks dealing with transplantation and should not be depicted in the Orthodox iconography [16-18, 27]. The practice that the miracle is referred to in medical manuals dealing with the history of transplantation was criticized.

## COMMENTS

Most of the representations of the Miracle of the Black Leg were made in the 13<sup>th</sup> - 14<sup>th</sup> century. After ca.1580, their number decreased considerably. From 1900 to the present, 20 illustrations of the miracle have been collected.

Zimmerman [1] stated that the number of the pictures decreased partly because of the increasing skepticism toward the extremely miraculous events, such as the replacement and graft of the whole leg. Urged by the criticism of that time and the outcome of the Council of Trent, held from 1545 to 1564, the Roman Catholic Church closely scrutinized the credibility of the saints and their numerous legends. Later, the illustrations rather represented a surgical operation (included surgical instruments, blood etc.) than the miracle [1,22]. Some legends were considered rather superstitious. The Saints were no longer perceived as the miracle workers, but as the visionaries who communicate with the divine [20].

The exploration of available Christian Orthodox hagiographical texts for insight into healing powers of Sts. Cosmas and Damian showed remarkable neglect of the miracle of the black leg. Art historians have so far contributed relatively little to the debate. Despite the overwhelming impact of the cult of the saints in Byzantine art, narrative scenes depicting the lives of the saints are relatively rare [10].

The transplanted leg appears to be the right one almost twice more often than the left one. In all Greek depictions, the right leg was grafted. It also seems that in some paintings of the Miracle of the black leg, the side of the transplanted leg graft is not well matched in the donor (left) and the recipient (right), as in a work of Italian painter M. Benedetti (1750, Archiginnasio, Bologna) [1,4].

The first human hand transplantation was performed by Dr. Jean-Michel Dubernard and French surgeons, his collaborators at the Edouard Herriot Hospital in Lyon, France on September 23, 1998. They grafted the right forearm and hand of a brain-dead male donor, aged 41 years, to the body of a New Zealander, Clint Hallam, who had a traumatic mid-forearm amputation [30,31]. In 2001 the transplant was concluded to be unsuccessful because the recipient described his new hand as “hideous and withered” and asked for it to be removed because he felt “mentally detached” from it [21].

The most distinctive feature of the iconography of Cosmas and Damian was the use of the medical attributes that included a variety of items such as scrolls, instrument rolls, scalpels and boxes or cases for surgical instruments that would have been familiar to the contemporary physicians. The hagiography that identified Sts. Cosmas and Damian as Christian doctors, martyrs and miracle healers would have had to be drawn on as well as the appearance and the attributes of contemporary physicians.

Cosmas and Damian could be regarded as the representatives of a growing and diverse medical profession and its functions. The legend of the Black Leg originated as the tale of a miracle performed by two of Lord’s faithful devotees. The illustrations had to be visual expression of this supernatural dimension.

Although the miraculous aspect of the story is no longer believed, many western medieval, depictions have become artistic testimonies to the fascination with an extraordinary old legend.

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#### SAŽETAK

*Pripovijesti o kršćanskim čudima snažno podržavaju liječnički identitet svetih Kuzme i Damjana. Čudo Crne noge je njihovo najznamenitije posmrtno čudo. Zlatna Legenda, koju je napisao Jacopo da Voragine, glavni je izvor ove pripovijesti. Ova zbirka čudesnih hagiografija prikupljena je u XIII stoljeću. Sveti Kuzma i Damjan čudotvorno transplantiraju crnu nogu Etiopljanina, crkvenjaku bijelog tijela, čija je noga zahvaćena tumorom. Svetitelji su se pojavili u snu bolesnika s oboljelom nogom, amputirali je i zamijenili nogom nedavno preminule osobe. Ovo dramatično izlječenje privuklo je mnoge zapadne umjetnike. Ikonografija Čuda Crne noge po prvi puta je predstavljena u Firenzi oko 1370. godine. Boja noge je kasnije privukla posebnu pozornost.*

*Počevši od 1990. godine u Grčkoj su se pojavile ilustracije Čuda Crne noge u (novo) Bizantskom stilu. Ovo čudo Svetih Beszrebrenika nije povijesno zasnovano na Knjigama života Svetih u pravoslavnim crkvama. Djelovanje svetih liječnika usmjereno na zamjenu oboljele noge onom uzetom od mrtvog donora, bilo je nepoznato istočnom Kršćanstvu. Procjena izlječivih, čudotvornih moći Svetih Kuzme i Damjana u dostupnim pravoslavnim hagiografskim izvorima pokazala je izrazito zanemarivanje čuda Crne noge. Neki suvremeni Grčki autori smatraju da ono ne zavrjeđuje pozornost.*

**Ključne riječi:** Čudo Crne noge; sv. Kuzma i Damjan; Grčka