"shroud" of Turin

"All empirical evidence and logical reasoning concerning the shroud of Turin will lead any objective, rational person to the firm conclusion that the shroud is an artifact created by an artist in the fourteenth-century." --Steven D. Schaefersman

The "shroud" of Turin is a woven cloth about 14 feet long and 3.5 feet wide with an image of a man on it. Actually, it has two images, one frontal and one rear, with the heads meeting in the middle. It has been noted that if the shroud were really wrapped over a body there should be a space where the two heads meet. It has also been noted that there is a space where the front and back of the head meet, and that what appears to be the outline of the back of the head is a water stain. Some have noted that the head is 5% too large for its body, the nose is disproportionate, and the arms are too long. Others deny these claims. In any case, the image is believed by many to be a negative image of the crucified Jesus and the shroud is believed to be his burial shroud. Most skeptics think the image is not a burial shroud, but a painting and a pious hoax. The shroud is kept in the cathedral of St. John the Baptist in Turin, Italy.

Apparently, the first historical mention of the shroud as the "shroud of Turin" is in the late 16th century when it was brought to the cathedral in that city, though it was allegedly discovered in Turkey during one of the so-called "Holy" Crusades in the so-called "Middle" Ages. In 1988, the Vatican allowed the shroud to be dated by three independent sources--Oxford University, the University of Arizona, and the Swiss Federal Institute of Technology--and each of them dated the cloth as originating in medieval times, around 1350.

The shroud allegedly was in a fire during the early part of the 16th century and, according to believers in the shroud's authenticity, that is what accounts for the carbon dating of the shroud as being no more than 650 years old. To non-believers, this sounds like an ad hoc hypothesis.

According to microchemist Dr. Walter McCrone,

The suggestion that the 1532 Chambery fire changed the date of the cloth is ludicrous. Samples for C-dating are routinely and completely burned to CO₂ as part of a well-tested purification procedure. The suggestions that modern biological contaminants were sufficient to modernize the date are also ridiculous. A weight of 20th century carbon equaling nearly two times the weight of the Shroud carbon itself would be required to change a 1st century date to the 14th century (see Carbon 14.)
It may interest skeptics to know that many people of faith believe that there is scientific evidence which supports their belief in the shroud's authenticity. Of course, the evidence is limited almost exclusively to pointing out facts that would be true if the shroud were authentic. For example, it is claimed to be the negative image of a crucifixion victim. It is claimed to be the image of a man brutally beaten in a way which corresponds to the way Jesus is thought to have been treated. It is also claimed that the image is not a painting but a miraculously transposed image.

the relic trade

Skeptics believe that the shroud of Turin is just another religious relic invented to beef up the pilgrimage business or impress infidels. (Another equally famous painting, also claimed to have miraculously appeared on a cloth, cropped up in Mexico in the 16th century, "Our Lady of Guadalupe."). The case for the forged shroud is made most forcefully by Joe Nickell in his Inquest On The Shroud Of Turin, which was written in collaboration with a panel of scientific and technical experts. The author claims that historical, iconographic, pathological, physical, and chemical evidence points to its inauthenticity. The shroud is a 14th century painting, not a 2000-year-old cloth with Jesus's image.

McCrone's theory is that "a male model was daubed with paint and wrapped in the sheet to create the shadowy figure of Jesus." The model was covered in red ochre, "a pigment found in earth and widely used in Italy during the Middle Ages, and pressed his forehead, cheekbones and other parts of his head and body on to the linen to create the image that exists today. Vermilion paint, made from mercuric sulphide, was then splashed onto the image's wrists, feet and body to represent blood."

McCrone analyzed the shroud and found traces of chemicals that were used in "two common artist's pigments of the 14th century, red ochre and vermilion, with a collagen (gelatin) tempera binder" (McCrone 1998). He makes his complete case that the shroud is a medieval painting in Judgment Day for the Shroud of Turin (March 1999). For his work, McCrone was awarded the American Chemical Society's Award in Analytical Chemistry in 2000.

the evidence for authenticity

The shroud, however, has many defenders who believe they have demonstrated that the cloth is not a forgery, dates from the time of Jesus, is of miraculous origin, etc. It is claimed that there is type AB blood on the shroud. Skeptics deny it. Blood has not been identified on the shroud directly, but it has been identified on sticky tape that was used to lift fibrils from the shroud. Dried, aged blood is black. The stains on the shroud are red. Forensic tests on the red stuff have identified it as red ocher and vermilion tempera paint. Other tests by Adler and Heller have identified it as blood.* If it is blood, it could be the blood of some 14th century person. It could be the blood of someone wrapped in the shroud, or the blood of the creator of the shroud, or of anyone who has ever handled the shroud, or of anyone who handled the sticky tape. But even if there were blood on the shroud, that would have no bearing on the age of the shroud or on its authenticity.

It is claimed that the cloth has some pollen grains and images on it that are of plants found only in the Dead Sea region of Israel. Avinoam Danin, a botanist from Hebrew University of Jerusalem claims he has identified pollen from the tumbleweed Gundelia tournefortii and a bean caper on the shroud. He claims this combination is found only around Jerusalem. Some believers think...
the crown of thorns was made of this type of tumbleweed. However, Danin did not examine the shroud itself. His sample of pollen grains originated with Max Frei, who tape-lifted pollen grain samples from the shroud. Frei's pollen grains have been controversial from the beginning. Frei, who once pronounced the forged "Hitler Diaries" to be genuine, probably introduced the pollen grains himself or was duped and innocently picked up pollen grains another pious fraud had introduced (Nickell).

Danin and his colleague Uri Baruch also claim that they found impressions of flowers on the shroud and that those flowers could only come from Israel. However, the floral images they see are hidden in mottled stains much the way the image of Jesus is hidden in a tortilla or the image of Mary is hidden in the bark of a tree. The first to see flowers in the stains was a psychiatrist, who was probably an expert at seeing personality traits in inkblots (Nickell, 1994) Danin notes that another relic believed to be the burial face cloth of Jesus (the Sudarium of Oviedo in Spain) contains the same two types of pollen grains as the Shroud and also is stained with type AB blood. Since the Sudarium is believed to have existed before the 8th century, according to Danin, there is "clear evidence that the shroud originated before the eighth century." The cloth is believed to have been in a chest of relics from at least the time of the Moorish invasion of Spain. It is said to have been in the chest when it was opened in 1075. But, since there is no blood on the shroud of Turin and there is no good reason to accept Danin's assumption that the pollen grains were on the Shroud from its origin, this argument is spurious.

In any case, the fact that pollen grains found near the Dead Sea or Jerusalem were on the shroud means little. Even if the pollen grains weren't introduced by some pious fraud, they could have been carried to the shroud by anyone who handled it. In short, the pollen grains could have originated in Jerusalem at any time before or after the appearance of the shroud in Italy. This is not a very strong piece of evidence.

Moreover, that there are two cloths believed to have been wrapped around the dead body of Jesus does not strengthen the claim that the shroud is authentic, but weakens it. How many more cloths are there that we don't know about? Were they mass produced like pieces of the true cross, straw from Jesus' manger, chunks of Noah's ark? That cloths in Spain and Italy have identical pollen grains and blood stains is a bit less than "clear evidence" that they originated at the same time, especially since there is clear evidence that the claim that they have identical pollen grains and blood stains is not true. But, even if it were true, it would be of little value in establishing that either of these cloths touched the body of Jesus.

unraveling the weave

The weave of the cloth is said to be typical of the weave wealthy Jews would have had in the time of Jesus. The weave of the wealthy Jew doesn't seem consistent with the kind of people Jesus supposedly hung out with. However, as one reader, Hal Nelson, pointed out, "The linen cloth was supplied by Joseph of Arimathea, described in Matthew 27 as a "rich man" as well as a disciple. (The weave of Turin is herring bone; the weave of Oviedo is taffeta, proving, I suppose, that Jesus had disciples of all types, even AB.) The image is of a man about six feet tall. The size and weave of
the cloth have convinced one researcher/believer that the cloth may have been used as a tablecloth for the Last Supper. It could have been used for a lot of other things as well, I suppose.

To the believer, however, it is not the scientific proof of the shroud's authenticity that gives the shroud its special significance. It is the faith in the miraculous origin of the image that defines their belief. The miracle is taken as a sign that the resurrection really happened and that Jesus was divine.

**Just another relic?**

Perhaps the most fascinating aspect of the shroud of Turin controversy is the way true believers keep bringing up red herrings and the way skeptics keep taking the bait. Danin made his plant image/pollen grain argument in 1998, a follow-up on another plant image argument he made in 1997. He said in the 1998 article that his evidence showed that "the Shroud could have come only from the Near East." An AP article by Traci Angel (8/3/99) quotes Danin as saying that the evidence "clearly point to a floral grouping from the area surrounding Jerusalem." No doubt, a raging debate will follow (once again!) as to the origin of the plants and pollen gains. As if it matters. Even if it is established beyond any reasonable doubt that the shroud originated in Jerusalem and was used to wrap up the body of Jesus, so what? Would that prove Jesus rose from the dead? I don't think so. To believe anyone rose from the dead can't be based on physical evidence, because resurrection is a physical impossibility. Only religious faith can sustain such a belief. To believe that someone floated up to the sky and disappeared (i.e., rose into heaven) is also not going to be proved one way or the other by these shroud arguments. Finally, no amount of physical evidence could ever demonstrate that a man was a god, was also his own Father and conceived without his mother ever having had sex. Thus, no matter how many brilliant scientists marshal forth their brilliant papers with evidence for images of Biblical ropes, sponges, thorns, spears, flowers, tumbleweeds, blood, etc., none of it has the slightest relevance for proving these matters of faith.

**latest news**

Dr. Raymond Rogers, a retired chemist from Los Alamos National Laboratory in New Mexico, claims that the part of the cloth tested and dated at around 1350 was not part of the original shroud. According to Rogers, the labs that dated the cloth to the 14th century tested a patch made to repair damage done by fire. How does he know this, since the patch was destroyed in the testing? According to shroud investigator Joe Nickell, Rogers "relied on two little threads allegedly left over from the sampling" and the word of "pro-authenticity researchers who guessed that the carbon-14 sample came from a 'rewoven area' of repair." According to Nickell, P.E. Damon's 1989 article published in Nature claims that "textile experts specifically made efforts to select a site for taking the radiocarbon sample that was away from patches and seams."

Says Nickell,

Rogers compared the threads with some small samples from elsewhere on the Shroud, claiming to find differences between the two sets of threads that "prove" the radiocarbon sample "was not part of the original cloth" of the Turin shroud.

The reported differences include the presence—allegedly only on the "radiocarbon sample"—of cotton fibers and a coating of madder root dye in a binding medium that his tests "suggest" is gum Arabic....However, Rogers' assertions to the contrary, both the cotton and the madder have been
Dr. Rogers estimates the actual date of the shroud to be between about 1,000 BCE and 1700 CE. Still, all the evidence points toward the medieval forgery hypothesis. As Nickell notes, "no examples of its complex herringbone weave are known from the time of Jesus when, in any case, burial cloths tended to be of plain weave" (1998: 35). "In addition, Jewish burial practice utilized—and the Gospel of John specifically describes for Jesus—multiple burial wrappings with a separate cloth over the face."

Other evidence of medieval fakery includes the shroud's lack of historical record prior to the mid-fourteenth century—when a bishop reported the artist's confession—as well as serious anatomical problems, the lack of wraparound distortions, the resemblance of the figure to medieval depictions of Jesus, and suspiciously bright red and picturelike "blood" stains which failed a battery of sophisticated tests by forensic serologists, among many other indicators. (Nickell 2005).

Of course, the cloth might be 3,000 or 2,000 years old, as Rogers speculates, but the image on the cloth could date from a much later period. No matter what date is correct for either the cloth or the image, the date cannot prove to any degree of reasonable probability that the cloth is the shroud Jesus was wrapped in and that the image is somehow miraculous. To believe that will always be a matter of faith, not scientific proof.

Alberto Carpinteri, a professor of structural mechanics at the Polytechnic University of Turin, has announced that he and a few colleagues "believe it is possible that neutron emissions by earthquakes could have induced the image formation on the Shroud's [sic] linen fibres, through thermal neutron capture on nitrogen nuclei, and could also have caused a wrong radiocarbon dating." I believe it is possible that pigs sent from an alien world created the shroud to see what follies humans would engage in. We can all believe what we want about what's possible, but in this case it is important to note that Carpinteri's belief about neutron emissions from rocks is universally rejected by physicists. Carpinteri was the president of the National Institute for Research in Metrology (INRiM) until he was dismissed after two-thirds of the board of directors resigned in objection to his support of piezonuclear fission.* The resignations came on the heels of a petition signed by 1,200 INRiM researchers and staff addressed to Minister of Education Francesco Profumo expressing their concerns about Carpinteri.* Carpinteri's response to his critics was to threaten them with legal action. Profumo's response was to announce that he has no intention of funding piezonuclear research without the backing of the scientific community.*

Piezonuclear fission is the notion that "compressing solids can provoke nucleus-splitting reactions without emitting gamma-rays or producing nuclear waste."

Carpinteri, a civil engineer at the Politecnico di Torino in Turin, Italy, has worked on the controversial research with a handful of other Italian scientists since 2008. His collaborators include Fabio Cardone, a physicist at the National Research Council in Rome. The researchers claim that when they crush various kinds of rock, they observe very high emissions of neutrons: 10 times the background level in the case of granite, and 100 times in the
case of basalt. They interpret the emissions as being due to the splitting, or fission, of iron atoms in the rock into lighter atoms such as those of aluminum. Unlike the materials used in conventional fission reactions, the crushed rock does not emit ionizing gamma rays or leave behind radioactive waste, the researchers say.

Other researchers, however, remain far from convinced. Three different groups, from Canada, Sweden, and Italy, published papers in 2010 criticizing the rock-compression experiments and similar work by Cardone. And in a paper uploaded to the arXiv preprint server on 29 May, nine researchers from INRIM took aim at the chemical analysis carried out on the rock samples. They show that many identical numbers reported in the analysis, which are quoted to two decimal places, are more closely correlated than would be expected from independent measurements—although the paper says nothing about how the correlation might have occurred.

In short, what we have here is speculation built on speculation. A possible physical event possibly causes a nuclear event that possibly causes an image of a body on a cloth wrapped around the body and possibly infuses the cloth with misleading amounts of carbon-14 isotopes. No mention is made of how this alleged nuclear event transformed body parts into paint, however. Nor is any mention made that if Carpinteri's speculations were true, no carbon-14 dating is reliable because some earthquake at some point in time could have resulted in misleading amounts of carbon-14 isotopes.

By trying to connect his beliefs about earthquakes, rocks, and piezonuclear fission to the dating of the shroud of Turin, Carpinteri seems to be reaching out to a fragment of the faith-based community that still clings to whatever thread keeps hope alive that the shroud is miraculous and a physical connection to Jesus. Having been rejected by the scientific community, he now appeals to a group likely to cheer him on in whatever folly he proposes as long as it keeps hope alive.

See also faith, miracle, and Lying for God.

reader comments

further reading

books and articles


Freeman, Charles. 2012. "The Shroud of Turin and the Image of Edessa: A Misguided Journey" "When I was researching my book on medieval relics, Holy Bones, Holy Dust, How Relics Shaped the History of the Medieval World, Yale University Press, 2011, I decided to leave out the Shroud of Turin. Relic cults come and go and the Turin Shroud is very much a cult of the past fifty years, not a medieval one. The debates over its authenticity have been acrimonious and inconclusive. However, having been sent a copy of Thomas de Wesselow's The Sign, the Shroud of Turin and the Secret of the Resurrection, Viking, 2012, I had strong reservations about much of the historical evidence presented to provide an narrative history of the Shroud before 1350. Despite many years of research de Wesselow uncritically accepts much of the work of the veteran Shroud researcher Ian Wilson whose latest volume,
The Shroud, Fresh Light on the 2000-year-old Mystery, Bantam Books, 2011, is used here. So much has been written about the Shroud that I am unlikely to provide much new material but I hope to clarify some issues by placing the Shroud within the wider context of medieval relics.


Toro, Hernán. 2004. Las anomalías ignoradas del "sudario" de Turín. Pensar. Vol. 1 No. 1. Despite the abundance of pseudo-scientific verbiage used by defenders of the "shroud" as the burial cloth of Jesus, the authenticity of the the images on the "shroud" cannot withstand a simple logical analysis. The figure is not a negative, the image is not anatomically accurate, no one can say that the wounds of the nails are on the wrists, the spots of "blood" are but pictures painted with red ocher and vermilion, the supposed corpse has ape-like proportions and adopts impossible positions, and the figure does not satisfy the geometric conditions of contact formation.

websites

The Shroud of Turin Research at McCrone Research Institute


The Skeptical Shroud of Turin Website

Cloudy shroud Is the linen a holy relic or just a pious fraud? Jeffery L. Sheler

Debunking the Shroud - Made by Human Hands by Gary Vikan

Barry Schwortz's Shroud of Turin page

Science, Archaeology, and the Shroud of Turin PAUL C. MALONEY General Projects Director Association of Scientists and Scholars International for the Shroud of Turin

news

Turin "Shroud" Still a Fake by Joe Nickell. October 2, 2015 "In 2005, Turin Shroud proponent Ray Rogers claimed that earlier carbon-14 tests of the shroud linen—showing it to date from between 1260 and 1390 and to thus be a fake—were invalid because, he hypothesized, the samples must have been taken
from a "medieval patch." Rogers and I had an exchange of arguments in the Skeptical Inquirer. But a new paper by three Italian chemists, in the same journal in which Rogers published, shows who was right.”

Shroud of Turin depicts Y-shaped crucifixion"...Borrini wanted to know if the 'bloodstains' on the left arm, the clearest ones, were consistent with the flow of blood from the wrist of a crucified person. So he asked Luigi Garlaschelli of the University of Pavia, Italy, to assume different crucifixion postures, while a cannula attached to his wrist dribbled donated blood down his arm...."

Turin “Shroud” Called “Supernatural” by Joe Nickell”...scientists working for the Italian government have claimed to find evidence that the image of Jesus crucified appearing on the notorious Shroud of Turin was not produced by a medieval artist but instead was likely caused by a supernatural event. Unfortunately, their work violates so many principles of science and logic as to raise serious questions about their motivation."

The Shroud of Turin: The Great Gothic Art Fraud — Because If It's Real the Brain of Jesus Was the Size of a Protohuman's! by Gregory S. Paul

“This note is intended to describe why, from an artistic and anatomical perspective, the shroud image is an embarrassingly obvious fraud committed by a Gothic artist following the standard conventions of his time. The artistic errors are so severe that it is impossible for the shroud to record the image of an actual human body—unless it was a very seriously pathological person with a brain the size of a Homo erectus.”

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