

The Shroud of Turin

Latest Research Bolsters Authenticity

by Shafer Parker

No single Christian artifact is more challenging to skeptics than the Shroud of Turin: Once dismissed as a particularly adept medieval forgery, in recent years it has been gaining even more scientific support that it is precisely what tradition has always claimed it is – the burial cloth that for 30 hours was wound about the recumbent body of the crucified Jesus.

In 1988, the shroud's credibility suffered a setback after three separate carbon-dating tests placed the origin of its linen fibers no earlier than the 13th century AD, about the time it received what has long been assumed to be its first documented references in western Europe. But at a congress in May in Vienna, scientific researchers detailed solid scientific reasons why carbon dating might never work with the shroud.

And a new thesis, advanced this summer by Italian journalist Orazio Petrosillo and based on research by American, English and Swiss scientists, argues the shrouds carbon dating was compromised by a failure to recognize that new material had been added during a unique mending process undertaken in the Middle Ages.

Meanwhile, an increasing amount of research unrelated to carbon dating continues to point to a first-century Palestinian origin for the shroud's material. For example, Dr. Mechthild Flury-Lemburg, former curator of the Abegg Foundation textile museum in Berne, Switzerland, and a world authority on ancient textiles, told the Vienna conference the weave and style of the material were from the Dead Sea area and could only have been woven in the period from 40 years before the birth of Christ up to 70 years afterward.

The material, a rare 3-to-1 herringbone twill weave of hand spun linen, is so unique that "there is no way it could have been a forgery from the thirteenth to fourteenth centuries," Flury-Lemberg said. Turin University pathologist Dr. Pieluigi Baima Bollone added that close examination of the cloth revealed images of two coins from the time of Pontius Pilate on the shroud, a further indication the image predated the Middle Ages.

But perhaps the most significant material presented in Vienna came from Piero Savarino, professor of industrial organic chemistry at the University of Turin. In an interview with the Register, Savarino pointed out that the human image on the shroud rests on the outer fibers of the linen weave, in a layer thinner than a human hair. Furthermore, it presents an X-ray like picture of the skeletal system, particularly displaying the bones of both hands, the left wrist, the skull and front teeth and some of the vertebrae.

"We know the image could not have been a painting because it resulted from rapid dehydration of the cellulose in the fabric" similar to what happens in a fire, Savarino said, "but we also know that this process was done without heat. And how that could happen is a mystery." Savarino explained that when the chemical decomposition of material is accompanied by heat, substances called pyrolys are left behind. And while those pyrolys can be found in abundance in the parts of the shroud scorched by the various cathedral fires it has suffered through the centuries, none are connected to the image itself.

"That's why some scientists have suggested that the image resulted from a controlled nuclear event that occurred at the moment of the Lord's Resurrection," said Dr. Alan Whanger, professor emeritus of Duke University Medical Center in Durham, NC, and Director of the Council for study of the Shroud of Turin. "His body would have given off massive amounts of radiation as it dematerialized and passed through the Shroud, leaving a kind of negative photograph with an X-ray component relating to the bones resting near the material."

Whanger noted that Canadian physicist Thaddeus Trenn, director of the science and religion program at the University of Toronto, has hypothesized that an influx of energy overcame the strong force that bound together the protons and neutrons in the body of the man lying in the Shroud. Such an instantaneous event would have released massive amounts of X-rays. Moreover, Trenn has pointed out, the dematerialization theory is supported by distortions in the Shroud image that indicate that it was collapsing in upon itself at the precise moment the image was being produced. And only dematerialization explains how the body could have been lifted away from the blood that had soaked into the fabric while leaving no trace of pulled fibrils on the Shrouds surface.

Whanger said an event like that would have created a massive amount of neutron irradiation, which would lay down levels of carbon-14 all out of proportion to anything that would occur naturally. That could explain why attempts at carbon-14 dating have failed to support the Shroud's authenticity. "I don't think they'll ever get the carbon dating to line up with the rest of what we know about the shroud," Whanger said.

Petrosillo reaches the same conclusion in an article published this past summer in the Roman newspaper *IL Messaggero*. Researchers, he wrote, have discovered different weaves in some of the threads analyzed in the 1988 carbon-14 dating attempt. The different weaves are the result of an invisible mend, in which new threads were woven directly into older, original material sometime during the Middle Ages. Where the invisible mend occurred, the new fibers are coated with a dark yellow starchy substance common for medieval fabrics. The older fibers lack the substance.

A thread from the older side was dated at the California Institute of Technology back to the third century. On the other hand, the newer, coated material dated back to the 13th century. Petrosillo reports that according to Beta Analytic, a radiocarbon dating service, a mixture of 60% of 16th century material with 40% of first century material could lead to a dating of the 13th century.

Apart from carbon dating, an extensive amount of evidence indicates the shroud is genuine and from the period in which Christ lived. The nail holes, for instance, are placed not in the palms but in the wrists, a position necessary to support the crucified man's full body weight, but also a bit of knowledge unknown to medieval artists.

Also persuasive are images on the cloth of the titulus, the board nailed to Jesus' cross upon which Pilate wrote the words, "The King of the Jews"; the 24 flower images identified on the shroud, all from plants with geographical ranges known to overlap only within the vicinity of Jerusalem; the crown of thorns revealed on the cloth to be lying next to the body, an appearance unique to Christ because no one else is known to have been so crowned prior to their crucifixion. Moreover, discoveries of ancient records in European libraries and museums, including drawings and written descriptions of the shroud, have pushed knowledge of its existence back several hundred years before it was first known to have begun its Turin residency.

Leading shroud skeptic Walter McCrone, a forensic scientist who has studied the cloth since 1974, did not respond to Register requests for interviews. But in an earlier interview with this writer, he insisted the shroud is a pious fraud designed to compete with similar products in the Middle Ages' burgeoning relics market. His analysis of fibers lifted from the shroud onto sticky tape led him to conclude that the image is a clever painting, done with a red ochre tint in a very dilute gelatin solution.

"Of course he found evidence of paint," Whanger replied. "The shroud was known to have been the basis for some 55 'true copies,' handmade reproductions of the shroud's image produced by medieval artists who would then lay their work on top of the original for added sanctity. Such an action would inevitably leave threads behind and provide the source of the iron oxide that has been found."

Faith and Science

But even the shroud's scientific supporters argue against using it as central proof of the Christian faith. "That's dangerous," Savarino said. "Faith must be found on the Word of God and Christ, not science." Speaking during a May 1988 visit to the shroud in Turin, Pope John Paul II stressed the Church does not regard the shroud's authenticity as a matter of Christian faith. "As it is not a matter of faith, the Church has no specific competence to pronounce itself on these questions. It entrusts the task of research to scientists; to arrive at appropriate answers for questions related to this cloth. What really counts for believers is that the holy shroud is a mirror of the Gospel," the Holy Father explained, emphasizing that there is a convergence between the gospel narrative and the image of the man on the cloth.

Nevertheless, a number of former skeptics have found that their shroud studies surprised them with an unexpected spiritual component. "When I really came to accept the shroud's authenticity several years ago," said Phillip Wiebe, professor of philosophy at Trinity Western University in Langley, British Columbia, "I really began to believe in the resurrection. Then I found that for the first time in my adult life I was also comfortable with the other miracles in the New Testament, including the virgin birth of Christ. I asked myself, 'If this man had such an extraordinary end, then what was his beginning?'"

Added Wiebe: "I suddenly realized that if Jesus was the God-man, there must have been some purpose behind his death. I was then able to accept Christianity's other fundamental teachings. My faith was restored in a cascading series of insights in what I can only describe as a wonderful act of grace."

Copyright © 2002 [National Catholic Register](#)

Shafer Parker is a Correspondent for the National Catholic Register and writes from Edmonton, Alberta

Posted on StayCatholic.com