

# The Case of

WHAT HAPPENS WHEN FAITH ATTEMPTS A SCIENCE PROJECT

# the Shroud

Joe Nickell

**F**ew issues have offered a better opportunity for science to work cooperatively with religion than has the question of the authenticity of the Shroud of Turin. Yet scarcely has there been such divisiveness between the two spheres, and rarely has science been so abused as it has been in the shroud controversy. FREE INQUIRY has long monitored the debate.<sup>1</sup>

## DUBIOUS BEGINNINGS

The “shroud”—one of some 40 cloths alleged to be the very one that wrapped Jesus’s body in the tomb—first came to

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light amid accusations of fraud. It had been at the center of a faith-healing scam, or so it was reported to Pope Clement in 1389 by a bishop who went on to describe how a predecessor, Bishop Henri de Poitiers, had uncovered the artist who had made it. The artist admitted, the report added, that he had “cunningly painted” the shroud, which bore the “twofold image” (i.e., the front and back imprints) of an apparently crucified man.<sup>2</sup>

Clement had convincing evidence that the shroud was, as he officially concluded, a painted “representation.” In addition to the reported forger’s confession, there were such commonsense arguments as the cloth’s lack of historical record prior to the mid-1350s and that its owner, a man of modest means, refused to say how he had acquired the most holy relic in Christendom. Clement might also have

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noted the shroud’s incompatibility with the Bible, which described multiple burial wrappings, including a separate “napkin” that covered Jesus’s face (John 20:5–7).

Even so, the granddaughter of the original owner absconded with the shroud, representing it as authentic despite Clement’s official pronouncement. Eventually, although she would be excommunicated for it, she sold it to Duke Louis I of Savoy. Shroud proponents like to say she “gave” it to the Duke; it seems only fair to point out that, in return, he gave her the sum of two castles. Thus the cloth passed to what would become the Italian monarchy, although eventually it was in the actual custody of the Archbishop of Turin. At the death of the exiled King Umberto in 1983, it was finally bequeathed to the Vatican.<sup>3</sup>

Meanwhile, a century ago this year, the shroud’s “scientific” period began when the image on the cloth was photographed for the first time.

That resulted in the discovery that the darks and lights were reversed, and proponents rushed to proclaim the image a perfect photographic negative. How, they asked, could a medieval artist have accomplished this, long before photography was conceived? In fact, the image was only partially negative, just as an artist who wanted to create the effect of an *imprint* would have produced.<sup>4</sup> With the availability of photographs of the shroud came widespread study of its unique image and the creation of a new discipline, or pseudo-discipline, called “sindonology” or “shroud science.”

## SCIENTIFIC SCRUTINY

Actual scientific testing of the shroud began in 1969 and occurred in three main phases. Unfortunately, because the “relic” was in the control of its religious defenders, who wished it to be proved genuine but feared it might not, there were problems with the way the early tests were conducted, as we shall see. Yet each group produced a major finding:

*Fake blood.* An official commission conducted extensive tests of the “blood” on the shroud. Although the work was done in secret, and leaks and false denials soon created

something of a scandal, one of the results was noteworthy: the “blood” failed all tests, not only the preliminary ones but also such additional analyses as those for speciation and blood groups. The tests included chemical, microscopic, microchemical, and microspectroscopic analyses, as well as thin-layer chromatography and neutron activation analysis. The commission experts did note what they thought were traces of paint. Although Catholics, those conducting the tests on the blood were also internationally known forensic serologists, a fact that underscored the credibility of the results. (Critics had anticipated the negative findings because the shroud bloodstains were unnaturally picture-like and, in contrast to genuine old blood, still bright red.)<sup>5</sup>

*Tempera paint.* In 1978 the shroud was more extensively sampled by the Shroud of Turin Research Project (STURP), a scientific group that, alas, was composed primarily of religious believers. Its leaders served on the Executive Council of the pro-authenticity Holy Shroud Guild. An exception was Dr. Walter McCrone, an internationally known microanalyst and the only member of STURP with expertise in detecting forgeries and identifying paint pigments. McCrone discovered that the “blood” was actually tempera paint containing red ochre and vermilion pigments. He also found that the entire image area contained red ochre (which was not present on off-image areas), and he believed he detected a tempera binding medium there as well. He concluded the shroud was a medieval painting.<sup>6</sup>

*Medieval date.* A final blow to the shroud’s authenticity was delivered in 1988 when small swatches of the cloth were subjected to radiocarbon testing by accelerator mass spectrometry. Three laboratories—at Oxford, Zurich, and the University of Arizona—performed the tests, which yielded dates in the 1260–1390 range, a time fully consistent with the reported forger’s confession. The accuracy of the carbon dating was supported by tests on control samples from ancient cloths of known date (such as Cleopatra’s mummy wrapping).<sup>7</sup>

For their efforts, the skeptical Commission experts, Dr. McCrone, and the scientists who conducted the radiocarbon dating tests were publicly vilified and subjected to personal abuse from shroud zealots. McCrone, for example, was even held to a secrecy agreement that prevented him from publishing his findings, while authenticity advocates continued to tell the public there was no evidence of forgery. McCrone was eventually “drummed out” of STURP. Two other STURP scientists then claimed they had “identified the presence of blood” on the cloth, but their efforts suffered when it was shown that similar results could be obtained from tempera paint!<sup>8</sup>

It became clear that shroud enthusiasts typically begin with the desired answer and work backward to the evidence—challenging those facts that seem incompatible with authenticity and emphasizing those that could be construed to support it. They concocted one rationalization for

the contrary biblical description of Jesus’s burial (the evangelists could have been in error), another for the lack of historical record (the shroud could have been hidden away), yet another for the forger’s confession (the bishop might have misstated the case), and so on, with still other apologetics for the paint and the medieval carbon date.

The results of the carbon dating has been an especially serious problem and one that has not been neglected. For example, some scientists at the University of Texas Health Science Center claimed they had discovered microbial contamination on shroud samples that may have altered the radiocarbon dating, the implication being that the shroud might be genuine after all. However, simple calculations show that for there to be sufficient contamination to raise the date 13 centuries there would have to be twice as much debris, by weight, as the entire shroud cloth itself! Besides, both the Vatican and the Archbishop of Turin challenged the sample’s authenticity, and Walter McCrone stated unequivocally that the fibers shown in the scientists’ photomicrographs “did not come from the ‘Shroud’ of Turin.”<sup>9</sup>

Such embarrassments are common to shroud science. It has often been bad science, pseudoscience, even scientific fraud—as in the case of pollens that were purportedly found on the cloth and that supposedly proved it had once been in Palestine.<sup>10</sup>

In contrast, real science takes pains to be objective. Genuine scientists carefully collect evidence and follow it to the solution—an approach that ultimately prevailed in the shroud controversy. Indeed, overall, the details of scientific and even scholarly evidence were corroborative, that is mutually supportive. For example, there was no historical record prior to the forger’s confession because the shroud did not exist until that time. The bright-red “blood” was consistent with tempera paint, the presence of which, in turn, supported an artistic origin. And so on.

The lesson from the shroud controversy is clear. In the case of physical claims—even physical claims in the context of religious belief—it is unfettered science that is the means by which truth can be achieved. **Fi**

## Notes

1. Joe Nickell, “New Evidence: The Shroud of Turin Is a Forgery,” *FREE INQUIRY* 1, no. 3 (1981): pp. 28–30.
2. Joe Nickell, *Inquest on the Shroud of Turin* (Amherst, N.Y.: Prometheus Books, 1987), pp. 11–17.
3. *Ibid.*, pp. 17–19, 154.
4. *Ibid.*, pp. 77–78, 97–98.
5. *Ibid.*, pp. 109–114, 127–129.
6. Walter McCrone, *Judgment Day for the Turin Shroud* (Chicago: Microscope Publications, 1996).
7. P. E. Damon, et al., “Radiocarbon Dating of the Shroud of Turin,” *Nature* (1989) 337: 611–15.
8. *Inquest on the Shroud of Turin*, pp. 125, 132.
9. CSICOP (Committee for the Scientific Investigation of Claims of the Paranormal), Press release, May 31, 1996; reprinted in *Skeptical Briefs*, June 1996, p. 2.
10. *Judgment Day for the Turin Shroud*, pp. 291, 308.