

## ***An Open Letter to John Dominic Crossan***

# **Dear John, What Were You Thinking?**

In daily life, we assume as certain many things which, on a closer scrutiny, are found to be so full of apparent contradictions that only a great amount of thought enables us to know what it is that we really may believe. In the search for certainty, it is natural to begin with our present experiences, and in some sense, no doubt, knowledge is to be derived from them. But any statement as to what it is that our immediate experiences make us know is very likely to be wrong.

— Bertrand Russell, *Problems of Philosophy*

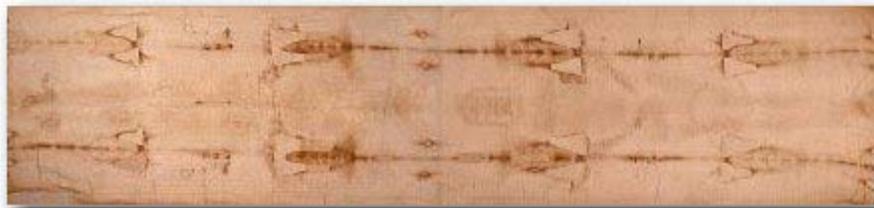
**D**ear Dom: Not long ago, on an Internet forum, someone asked you about the Shroud of Turin. When I read your answer, my first reaction was amazement. I might have thought that you answered carelessly were it not for two things: Your answer echoed, almost word for word, something you said in a television documentary. And, your analyses and historical reconstructions are always meticulously researched, complex and organized. – even as disturbing as some of them may be, as when you posit that Jesus was not even buried and possibly eaten by dogs and crows. Thus, I really did wonder (in a non-pejorative sense) *what were you thinking*. You had written in Beliefnet:

***Crossan:*** *My best understanding is that the Shroud of Turin is a medieval relic-forgery. I wonder whether it was done from a crucified dead body or from a crucified living body. That is the rather horrible question once you accept it as a forgery.*

Given the scarcity of articulate, fact-embracing perspectives that the Shroud is a medieval forgery and not the genuine burial Shroud of Jesus, your comment was intriguing. For you recognized both the prima facie case for the Shroud's medieval provenance and the contradiction of the horrific and chilling realism; the forensically correct bloodstains and the medically accurate images of a naked, much wounded, crucified man in burial repose. It is a contradiction because it is hard to imagine how such realism was achieved in light of what was known about human pathology in the Middle Ages. Others, who are skeptical of the Shroud's authenticity, usually focus only on the arguments that support medieval origin and shy from the mind-numbing realism and other evidence that seems to contradict that possibility. If I understand you correctly,

your hypothesis is that a crafter of fake relics used a *newly* crucified man to achieve medically accurate realism. There is, however, much new information, some of it very recent, that makes me wonder if what you wonder is plausible.

The bloodstains, as forensic scientists and chemists now know, are from real human blood. Moreover, the stains are from real human bleeding from real wounds on a real human body that came into direct contact with the cloth. Immunological, fluorescence and spectrographic tests as well as Rh and ABO typing of blood antigens reveal that the stains are from Type-AB human blood. When the stains formed, the man was lying on his back with his feet near one end of the fourteen foot long, banner shaped piece of cloth. The cloth was drawn over the top of his head and loosely draped over his face and the full length of his body down to his feet. Many of the stains have the distinctive forensic signature of clotting with red corpuscles about the edge of the clot and a clear yellowish halo of serum. The forensic experts are also able to identify that some of the blood flow was venous and some was arterial. Most of the blood flowed while the man was alive and it remained on his body. There is some blood that clearly oozed from a dead body, as was the case for stains resulting from a wound in the man's chest. Here, the blood, with a deeper color and more viscous consistency, as is the case for blood from a postmortem wound, ran from a chest wound, flowed around the side of the body and formed a puddle about the man's lower back. Mingled with these large bloodstains are stains from a clear bodily fluid, perhaps pericardial fluid or fluid from the pleural sac or pleural cavity. This suggests that the man received a postmortem stabbing wound in the vicinity of the heart.



Blood that flowed along once-outstretched arms emanate from the victim's wrists and course their way downward along the forearm, past the elbow and onto the back of the upper arm. Near the man's armpit the blood pooled and likely dripped to the ground. So much blood flowed along his outstretched arms that several rivulets of blood, pulled by gravity, ran straight down. It seems likely that blood dripped all along the man's arms like rain drips from a tree branch in a storm. From the angles of the flows and rivulets, forensic experts have determined that this blood flowed while the man was upright with his arms at angles like the hands of a clock at ten minutes before two. They can also see from changes in bloodstream angles that the man must have pulled himself up repeatedly, perhaps raising himself up to relieve the weight on his nailed feet, perhaps to relieve the pressure on his chest that he might breathe.

The clots, the serum separations, the mingling of body fluids, the directionality of the flows, and all other medically expected attributes would have been nearly impossible to create by brushing or daubing or pouring human blood onto the cloth. The blood, rich in the bilirubin, a bile pigment that the body produces under extreme trauma, is

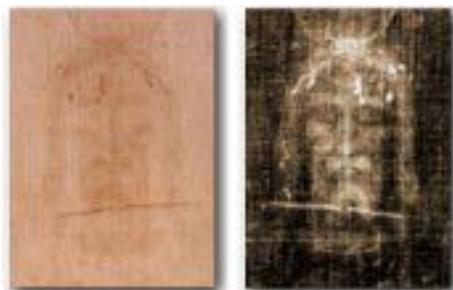
unquestionably the blood of the man whose lifeless, crucified body was enshrouded in the cloth; even if only for the purpose of crafting a relic-forgery in medieval times.

The faint shadowy images of the man on the Shroud are a bit more problematic. No one knows how these images were formed. They were not painted as some suppose. The chemistry and physics of the image chromophore – that which gives visible image – are now well understood even though the method by which the images were created remains a mystery. The images are the result of a selective, color producing chemical change to discrete lengths of some cellulosic fibers of the linen. Chemists describe the chemical change as an oxidation, dehydration and conjugation of the polysaccharide (long-chain sugar molecular) structure of the fibrils. Direct microscopic examination reveals that the image producing color is superficial to the top one or two fibrils of the topmost threads of the cloth. There is no evidence of any matting, capillarity, wicking, or penetration expected from liquids. The images could not have been created with paint, dye, stain or liquid chemical. Numerous tests including visible, ultraviolet and infrared light spectrometry, x-ray fluorescence spectrometry, and direct microscopic viewing of the Shroud confirm that the images were not painted. Other tests on particle samples collected from the Shroud's surface including microchemistry analysis, pyrolysis-mass-spectrometry, and laser-microprobe Raman analyses, further confirm this.

The images, closely examined with the aid of microscopes and microphotography, are similar to halftone images. Simply, this means that all the different shades of color are derived from the number and size of pixels of a single color in any given area of the image. A pixel (picture element) can be a dot, a short line or, as with the Shroud, a discrete length of fiber colored by the chemical alteration of the cellulose. Halftone is the method used to print black and white photographs in magazines and newspapers. Look closely at a picture in a newspaper and you will see that all the shades of gray are achieved with dots of only black ink. Halftone is also the way black and white pictures are printed on inkjet printers connected to home computers. With such printers, every shade of gray is produced by minuscule droplets of black ink. Where there are more droplets of ink the printed image is darker; where there are fewer droplets the image is lighter.

The images on the Shroud are not black and white, but they are monochromatic. That is, they are of a single color. The color is often described as sepia or straw yellow. The color produced by the chemical change to the fibers is constant and the various darker and lighter tones of color we perceive are the result of the density of the altered fibers. It is interesting to note that on a high quality inkjet printer (1200 dots per inch), the ink droplets are about 60 microns across, whereas on the Shroud, the image-bearing fibrils are only about 15 microns thick or about one fifth the thickness of typical human hair.

Another interesting attribute of the images is that they are negative images; that is with dark and lighter tones of color reversed. In that sense, the images on the Shroud are like photographic negatives. This attribute was discovered more



than a century ago, when in 1898, a photographer named Secondo Pia took the first-ever photographs of the Shroud with a large box camera. While developing his photographs he discovered that images that appeared on the glass plate negatives were positive images, startling in clarity and realistic appearance. For the first time people could see the amazing detail in the Shroud's images. It is not that the detail wasn't there on the Shroud. It was. But our minds are not well adapted to interpreting negative images. What for centuries had appeared only as ghostlike images now appeared to be graphically remarkable front and back pictures of the man on the Shroud.

But they may not be pictures at all but something else. At least they are not pictures of a human face or body in a traditional sense. When we look at a picture of a person we are looking at a representation of what we see with our eyes. What we see with our eyes is the light reflected from the face or the body. We may see shape but that is only a consequence of seeing reflected light. Light, in all its colors and varying intensities, is all that our eyes can detect. Drawings by children and simple cartoons may only show outlines and features, and we are left to imagine depth. But any picture that tries to convey a sense of dimensionality always shows how light is reflected from objects, faces, and bodies. This is true whether this picture is a drawing, painting, mosaic, photograph or any other form of two-dimensional art. While the face on the Shroud, in fact both body images, look like pictures of reflected light, image analysts tell us they are not.

Artists use many techniques to convey the sense of three-dimensionality into a painting: faces turned at angles, parts of an object or body protruding outward, placement of objects in front of other objects, perspective in which objects appear to become smaller as they recede into the distance, and the play of light on shapes and surfaces (as in Caravaggio's famous *Supper at Emmaus*). Of all of these, the play of light – showing highlights, lowlights and cast-shadows – is the most important method for conveying depth in a human face. We seem to see this in the face of the man of the Shroud. But on close examination we see that what appears to be the play of light is not light at all.



Light, in order to produce highlights, lowlights and cast-shadows, must have direction. While light may come from many directions, bouncing off of walls and objects and diffusing in the air as it does, it must nonetheless have a primary direction. If it does not, there is no way to convey a sense of depth. Look at a picture of a globe or the earth. Without the play of light on its surface, without highlights and lowlights it will look like a flat round surface. By having directionality, light enables us to see the earth is spherical. We

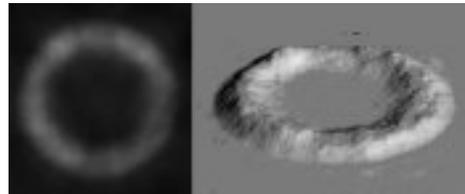


can say that light is what the artist encodes on his canvas. Light is also what the photographer's camera encodes on film.

When we look at the face of the man of the Shroud, we certainly seem to see depth from the play of light. Look at the tip of the nose, at the sides of the cheeks and the recesses of the eyes. But where is the light coming from? What is its direction? Image analysts, using computerized tools, tell us there is no light directionality at all. It doesn't come from the left or the right, from above or below, or from the front. That is because the images we see on the Shroud are not representations of reflected light. The areas of dark and light are not encoded light. They are not pictures by the hand and eyes of an artist. Nor are they some form of medieval proto-photography as some have suggested in a vague attempt to explain the images' photographic-like negativity.



It turns out that the Shroud images are terrain maps. What is encoded onto the Shroud is a terrain map of a man's head and body. Both the front side and the backside images are this. With space-age image analysis equipment or off-the-shelf graphics software running on a home



computer we can plot this encoded information and produce a realistic isometric plot, an angular view of a three-dimensional shape. The hazy donut shape shown above is an example of a terrain map for the crater rendered as a three-dimensional shape. In the case of the Shroud we do get a perfect three-dimensional rendering for many reasons: If, as scientists suspect, what is encoded on the Shroud, as data, is the distance between any point on the man's body and the cloth loosely draped about him, then the distance will be distorted by the drape of the cloth. We can assume it is not perfectly flat. Physicists have estimated that the maximum distance represented is about 3 or 4 centimeters, but we don't know how linear the scale might be in the image formation process. We might know that if we knew how the images were created, but we don't. The image is very old, medieval if you are right Dom; possibly even older than that. We don't know how fading or maturing of the images and the aging of the cloth might have altered the accuracy of the distance that is encoded. Finally there are bloodstains and dirt that cause distortions. That there is a distance encoded representation at all is amazing.



It is important to point out that no identified works of art, no known artifacts or relics of any kind will produce a 3D plot like the one produced by the Shroud. Researchers have tried every imaginable artistic method including bas-relief rubbings, scorching with hot statues, daubing the



surface with pigment dust, and image transfer rubbings. Nothing does or can be expected to produce a 3D plot.

Some researchers have suggested that the images might have been formed by some perfectly natural process such as a chemical reaction between funerary spices and bodily fluids. Even chemicals used on the linen cloth for softening, whitening, or preserving might have induced images. The working premise for a naturalistic explanation has generally been that the Shroud may be the authentic burial cloth of the historical Jesus but that the images are not necessarily supernatural in nature; that is they are not divinely wrought or the accidental byproduct of a miracle.

Nothing has been found that works. So far, no method has been found that will produce the chemical change to the cloth's fibrils, produce the negative image, and produce a spatially encoded terrain map.

The images pick up where the bloodstains leave off in revealing even more chilling, horrific pathological detail. Within those unexplained body images, the details of piercing wounds, lacerations, bruises, contusions, and abrasions are medically accurate. The man's once-outstretched arms are modestly folded at the wrists. It is on the images of the arms that we see the rivulets of blood. It is on the man's chest, between the fifth and sixth ribs that we see an elliptical gash from which the blood flowed under the man's lower back. We see the horrific wounds where the man was nailed to the cross. So accurate are the details, medical experts realize they demonstrate knowledge of pathology that was not understood in the Middle Ages; not by artists, not by crafters of fake relics, and not by the best medical minds of that age. How did this relic forger translate such medically accurate detail, both front and back images, onto the long piece of linen cloth?

What emerges from the cloth is an epic story, a reenactment of the passion sequence from the scourging, the walk to Calvary, the crucifixion, and the burial. The man of the Shroud was savagely flogged. Whatever was used, it is consistent with a Roman flagrum, a whip of short leather thongs tipped with bits of lead, bronze or bone which tore into flesh and muscle. There are dozens upon dozens of dumbbell shaped welts and contusions, the type of wound that the flagellum would have caused. There is blood from the flagellation and even a bit of tissue thought by medical experts to be a torn-out bit of muscle. From the angles of attack – the way the marks fall on the man's back, buttocks, and legs – it seems that man was whipped by two men, one taller than the other, who stood on either side of him.

At some time, the man may have been forced to wear a crown of thorns. That seems to be a logical explanation for the numerous puncture wounds about the top of his head. But from the wounds and drops of blood, it seems to have been more like a rough bunch of thorns, or a cap of thorns, and not like the wreath shaped crown of thorns so common in artistic depictions. There are details on the shroud that suggest both a beating and falling: a severely bruised left kneecap, a dislocated or possibly broken nasal cartilage, a large swelling around the right eye socket and cheekbone. There is, too, the puzzling fact that there are significant abrasions on both shoulders. On the shoulders, welts from the

apparent scourging are abraded as though rubbed over. Might this be from carrying the patibulum, the crossbeam of the cross, across both shoulders?

What is most interesting is that the man of the Shroud was crucified with large spikes driven through his wrists and not through the palms of his hands, something which contradicts all iconography of medieval and pre-medieval periods. This is evidenced by both the image and the bloodstains. This is, of course, more historically and medically plausible. It was not before the first part of the 20<sup>th</sup> century, that medical experts first realized that nails driven through a man's palms would not support a his weight – even if his feet were nailed or supported – and that the nails would tear out. That the Romans did crucify victims by driving nails through the wrist area of the forearm was confirmed by the 1968 archeological discovery of a crucifixion victim, named Johanan ben Ha-galgol, found near Jerusalem at Giv'at ha-Mivtar. If indeed the Shroud is a medieval forged relic, the craftsman who produced it knew how to do it right even if the nailing, the scalp wounds, and the man's nakedness defied the sensibilities of the time.

The Shroud is more mind-numbing than all other depictions ever made; from the earliest carvings of the crucifixion on 5<sup>th</sup> century coffins; from the wall painting of the passion so prominent in old English parish churches; from the imaginative grandeur of paintings by Rubens, Raphael, El Greco, and Velazquez; and from the spiritual visualizations of Salvador Dali. It stirs our imagination more than the drama of medieval mystery plays still performed in York or modern Broadway musicals and movies. It evokes more emotion than the great moving hymns “Were You There When They Crucified My Lord?” or “O Sacred Head, Sore Wounded.” It is, in the story it tells of the passion sequence, a picture not of a thousand words but a million.

Are we to imagine that a medieval craftsman knew of some method for producing the images, unknown or unrecognized by modern science? Whatever it was it seems to be without precedent in the arts, among other known relics, and among other artifacts of history. Whatever process a medieval craftsman might have used, it seems never to have been exploited since.

There is, of course, another possibility. Perhaps the crafter of relics was surprised to find images after he laid a bloody, crucified corpse onto his cloth. Perhaps, some unexplained chemical reaction occurred that formed the images. Perhaps the images were an accident in the process of forging a blood-only relic. We might think this possible, were it not for many other factors which must be considered. But first, let's look at the prima facie case for medieval provenance.

## **Why we may think the Shroud is medieval**

One would have thought that any interest in the Shroud of Turin would have quickly abated following the carbon 14 testing in 1988. According to the test results, it was not, as so many believed, the authentic burial Shroud of Jesus. It was medieval. *Nature*, the prestigious international weekly journal of science, published an article about the test

coauthored by twenty-one scientists from the University of Oxford, the University of Arizona, the Institut für Mittelenergiephysik in Zurich, Columbia University, and the British Museum. The conclusion in *Nature* was clear:

***Nature:*** *The results of radiocarbon measurements at Arizona, Oxford and Zurich yield a calibrated calendar age range with at least 95% confidence for the linen of the Shroud of Turin of AD 1260 - 1390 (rounded down/up to nearest 10 yr). These results therefore provide conclusive evidence that the linen of the Shroud of Turin is mediaeval.*

A headline in the New York Times read: “Test Shows Shroud of Turin to be Fraud.” Other newspapers around the world reported similar conclusions. One of the radiocarbon dating scientists from Oxford stated on public television: “We have shown the Shroud to be a fake. Anyone who disagrees with us ought to belong to the Flat Earth Society.”

But, to many people, the carbon 14 test results only made the Shroud all the more puzzling and all the more fascinating. There was, as had been discovered, a preponderance of other scientific and historical evidence that argued that the Shroud was really much older. Some of the evidence suggested that it had been in Constantinople at one time, in the ancient Christian community of Edessa before that, and in the environs of Jerusalem. Science and history seem to agree on this.

But it isn't just the carbon 14 results that point toward a medieval origin. The Shroud does have a definite footprint in medieval Europe. To some people this is evidence in itself. Its first known appearance in Western European history was in 1356, a time of unbridled superstition in demons, witches, magic, and miracle-working relics. It was a time of frequent famine and the Black Death plague. It was a time of extreme economic and political turbulence and of war. The same year that the Shroud was first displayed publicly in the small French village of Lirey, nearby, at the battle of Poitiers, England's Black Prince defeated the French and captured King John II of France. Adding to the political turmoil, the pope was in Avignon, not Rome — some even believed that the plague was God's retribution on the whole world because the pope was not in the eternal city. In this climate of superstition, naiveté and disorder a lucrative market in false relics flourished. The Fourth Lateran Council in 1215 acknowledged the problem with false relics but church authorities did little to curb the market in them – and it did indeed flourish. Our knowledge of this history rightly conditions us to be suspicious of any medieval relic that might first appear in Europe at this time.

In 1389, a memorandum written by Pierre d'Arcis, the Bishop of Troyes, France, openly challenged the authenticity of the Shroud. In the memorandum, addressed to the Avignon Pope Clement VII, Pierre claimed that an artist had admitted that he had 'cunningly painted' the Shroud.

In 1978, a decade before the carbon 14 tests, a large team of scientists had examined the Shroud in Turin. As part of that work, particle samples were collected from the Shroud's surface by pressing sticky tape onto the surface. Walter McCrone, a well-recognized expert in microanalysis and painting authentication, was provided with some

of the samples. He found minute traces of hematite (iron oxide) used for red ochre commonly referred to as Jeweler's Rouge and a concentration of mercuric sulphide, a constituent of vermilion paint. Both red ochre and vermilion were common paint pigments used during the Middle Ages.

For most people, this seems to be enough evidence to conclude that the Shroud is medieval. That would be true were it not for the fact that all this evidence has been severely questioned. The carbon 14 tests, conducted by three of the most reputable radiocarbon dating laboratories in the world, have been credibly challenged, sufficiently so that they can no longer be deemed definitive. The laboratories did the tests properly. There is little doubt about that. But there is now serious evidence that the samples cut from the Shroud and provided to the laboratories were contaminated. We cannot blame the labs. They had no way of knowing.

It may have been the fault of the Poor Clare nuns who mended the cloth in the 16<sup>th</sup> century, or of some master weaver in their employ who wove new thread into the cloth during repairs. We know from repaired tapestries how skilled medieval weavers were at the art of "French Weaving," what is now commonly called invisible weaving. Warp and weft threads were even spun by hand and dyed to match the original thread of a tapestry.

Enough newer thread has been identified by numerous textile experts to allow Beta Analytic, the world's largest and probably most prestigious radiocarbon dating firm, to estimate that the true date of the cloth's origin is much older – within a statistically acceptable margin of error to make the first century possible. Beta Analytic estimates that a mixture of 60% of material, from the 16th century, with 40% of material from the 1st century would yield the medieval date that was determined for the Shroud. Chemist Raymond Rogers has found a rubbery vegetable substance, probably gum arabic, on threads adjacent to where the carbon 14 samples were taken. It was common practice to use gum arabic to hold threads during weaving repairs. It is significant to note that Rogers found dyes extracted from the Madder root used with the gum arabic. According to Rogers, "They were colored for a purpose using technology that was not used in Italy before the 13th Century or in France before the 16th Century, about the time the time the Shroud was moved to Turin from France." Rogers has also found a spliced thread, likely of old and new material, among sample threads.

It is interesting to note that an article in *Textile Horizons* by P. H. Smith, entitled "Rogue Fibers Found in Shroud," was published in 1988 that speaks of the discovery of "a fine dark yellow strand [of cotton] possibly of Egyptian origin, and quite old . . . it may have been used for repairs at some time in the past, or simply bound in when the linen fabric was woven." This cotton was found by Smith while examining samples on behalf of the Oxford laboratory. This is important information.

In a new and very decisive paper on the subject, "Scientific Method Applied To The Shroud Of Turin: A Review," Raymond N. Rogers, a Laboratory Fellow at the University of California, Los Alamos National Laboratory and Anna Arnoldi of the University of Milan write:

**Rogers and Arnoldi:** *The combined evidence from chemistry, cotton content, technology, photography, and residual lignin proves that the material of the main part of the Shroud is significantly different from the radiocarbon sampling area. The validity of the radiocarbon sample must be questioned with regard to dating the production of the main part of the cloth. A rigorous application of Scientific Method would demand a confirmation of the date with a better selection of samples.*

The newer thread or gum arabic, or some combination of the two, may be enough to skew the date by enough centuries to make the Shroud a first century cloth. There is no way to calculate a revised age from the test records. Because carbon 14 testing destroys the samples, there is also no way to redo the tests. It is also unlikely – and reasonable – to doubt that the Vatican would allow new carbon 14 tests unless a clear, failsafe, and non-controversial testing protocol can be established. That is unlikely in the foreseeable future. But the clear evidence of substantial contamination is enough to call the carbon 14 results into question. They can no longer be thought of as definitive.

It has been well established that neither the images nor the bloodstain were painted. Thus McCrone's hypothesis and the d'Arcis Memorandum are irrelevant. There is little doubt that McCrone found iron oxide and mercury. But nowhere on the Shroud are there sufficient quantities of these chemical components of paint pigments to form a visible image. Iron oxide, for one thing, is a component of blood. It is expected. It would also be a byproduct of retting flax in iron rich water in the production of linen. As miniscule particles of rust (iron oxide) is often found in dust, so too might mercuric sulphide be present in dust, particularly in churches and cathedrals with frescoed walls and ceilings and old paintings. There is another possibility that might well explain the presence of paint particles on the Shroud. Many painted copies of the Shroud were produced. It was, after all, a revered relic. We know from history of a practice whereby artists would touch or lay their paintings on the Shroud for sanctification.

What are we to make of the d'Arcis Memorandum claiming that an artist painted it? Knowing, as we do, that this was a time notorious for its unscrupulous market in fake relics, the bishop's report seems to have a whiff of truthfulness to it. But the relic marketplace may also be the basis for doubting the veracity of the memorandum. Pilgrims were a source of revenue and people were flocking to Lirey rather than nearby Troyes. Pierre, interestingly, states that his intent was not competitive. Why? Did he realize that others were voicing suspicions about his motives? They were. Pierre claims that his predecessor, Bishop Henri de Poitiers of Troyes conducted an inquest in which a painter had confessed to painting the Shroud. Pierre doesn't have first hand knowledge of this artist. The artist is unnamed. There is no evidence of such an inquest in contemporaneous documents. Pierre states that Henri had the Shroud removed from the church because it was a fake, yet other documents dispute this. It was, according to other documents, removed from the church for safekeeping because of the war raging about the area. The memorandum must be understood and assessed in the light of several documents of the same period and in the context of the political situation in the region. At least eight documents challenge the veracity of the d'Arcis Memorandum.

There are other problems as well. All existing copies of the memorandum are unsigned and undated drafts. The copy at the Bibliotheque Nationale in Paris includes a heading stating that it is a letter that Pierre intends to write. It is definitely a draft with Latin annotations in the margins. It is unlikely that it was ever sent to Clement as no properly signed or sealed copies of the document can be found in the Vatican or Avignon archives. No document of Clement refers to it, suggesting it was never received. Numerous classicist and historians find the document questionable.

One cannot say that any of this proves that the Shroud is not medieval. It can only be said, that it has not been reliably shown to be medieval. Radiocarbon dating scientists knows that mistakes are made, that anomalous results are possible. No responsible archeologist, scientist or historian will accept a single point measurement – the samples used by the laboratories were snippets from a single cutting – in the absence of any corroborating evidence to declare the results infallible. In fact, in searching for other evidence, one finds significant evidence to dispute the findings and nothing to support them.

And so, to understand this relic, to try and ascertain its authenticity, we must look at other evidence; evidence that may shed some light on the Shroud's provenance; evidence that seemingly contradicts your hypothesis, Dom; evidence that contradicts a medieval origin. For as a medieval fake relic, it doesn't make sense.

## **The Sudarium of Oviedo**

In the city of Oviedo, in northern Spain, in a small chapel attached to the city's cathedral, there is a small bloodstained dishcloth size piece of linen that some believe is one of the burial cloths mentioned in John's Gospel. Tradition has it that this cloth, commonly known as the Sudarium of Oviedo, was used to cover Jesus' bloodied face following his death on the cross. Forensic analysis of the bloodstains suggests strongly that both the Sudarium and the Shroud covered the same human head at closely different times. Bloodstain patterns show that the Sudarium was placed about the man's head while he was still in a vertical position, presumably before he was removed from the cross. It was then removed before the Shroud was placed over the man's face.



If, in fact, the Sudarium is related to the Shroud, the implications for the carbon 14 dating are severe. The Sudarium, unquestionably, has been in Oviedo since the 8<sup>th</sup> century and in Spain since the 7<sup>th</sup> century. It seems, too, to have arrived from Jerusalem.

As you well know, documents in the late Roman period and the early middle ages are often sketchy and prone to chronological mistakes, and those pertaining to the Sudarium are no exception. But from a multiplicity of sources, scholars have extracted core elements of historical certainty and plausibility sufficient for a fair degree of

historical reconstruction. We can be quite sure that the Sudarium came to Oviedo from Jerusalem, and there is some evidence it dates back to the first century CE. Its journey to its present location began in 644 CE when Persians under Chosroes II invaded Jerusalem. To protect the Sudarium, it was moved out of the city to safety. We are uncertain of its route to Spain. It may have been first taken to Alexandria along with numerous other relics (real or otherwise, and stored in a chest or “ark”) and from there, in succeeding years, along the coast of North Africa ahead of advancing armies. Some historians have suggested a more direct sea route to Spain but forensic pollen evidence indicates that the Sudarium was in North Africa, just as the presence of other pollen spores evidences that it was at one time in the Jerusalem environs. Whatever the route, we know that after it arrived in Spain it was kept in Toledo for about 75 years. For some time after it arrived, it was in the custody of the great bishop and early-medieval scholar, Isidore of Seville. In 718, to protect it from Arab armies, which had invaded Spain only seven years earlier, it was moved northward with fleeing Christians. In 761, Oviedo became the capital of a northern, well-defended enclave of Christians on the Iberian Peninsula and it was to this city that the Sudarium was brought for safety. It has been in Oviedo since.

In 1999, Mark Guscin, a member of the multidisciplinary Investigation Team of the Centro Español de Sindonología, issued a detailed forensic and historical report entitled, “Recent Historical Investigations on the Sudarium of Oviedo.” Guscin’s report detailed recent findings of the history, forensic pathology, blood chemistry, and stain patterns on the Sudarium. His conclusion: the Sudarium and the Shroud of Turin had been used to cover the same injured head at closely different times. Here are some highlights from Guscin’s report:

*It seems to be a funeral cloth that was probably placed over the head of the corpse of an adult male of normal constitution. The man whose face the Sudarium covered had a beard, moustache and long hair, tied up at the nape of his neck into a ponytail.*

*The man was dead. The mechanism that formed the stains is incompatible with any kind of breathing movement.*

*The man was wounded before death with something that made his scalp bleed and produced wounds on his neck, shoulders and upper part of the back.*

*The man suffered a pulmonary edema as a consequence of the terminal process. The main stains are one part blood and six parts fluid from the pulmonary fluid.*

*The only position compatible with the formation of the stains on the Oviedo cloth is both arms outstretched above the head and the feet in such a position as to make breathing very difficult, i.e. a position totally compatible with crucifixion. We can say that the man was wounded first (blood on the head, shoulders and back) and then ‘crucified.’*

*On reaching the destination, the body was placed face up and for unknown reasons, the cloth was taken off the head.*

*The Sudarium contains pollen grains of Gundelia tournefortii, identical to that found of the Shroud that grows only east of the Mediterranean Sea as far north as Lebanon and as far south as Jerusalem.*

*The blood (stain symmetry, type and other indicators) on the Sudarium matches the blood on the Shroud.*

In summary, Guscini wrote:

*There are many points of coincidence between all these points and the Shroud of Turin - the blood group, the way the corpse was tortured and died, and the macroscopic overlay of the stains on each cloth. This is especially notable in that the blood on the Sudarium, shed in life as opposed to postmortem, corresponds exactly in blood group, blood type and surface area to those stains on the Shroud on the nape of the neck. If it is clear that the two cloths must have covered the same corpse, and this conclusion is inevitable from all the studies carried out up to date, and if the history of the Sudarium can be trustworthily extended back beyond the fourteenth century, which is often referred to as the Shroud's first documented historical appearance, then this would take the Shroud back to at least the earliest dates of the Sudarium's known history. The ark of relics and the Sudarium have without any doubt at all been in Spain since the beginning of the seventh century, and the history recorded in various manuscripts from various times and geographical areas take it all the way back to Jerusalem in the first century. The importance of this for Shroud history cannot be overstressed.*

## **Plant Images and Pollen Grains on the Shroud**

During a 1999 conference of the prestigious Missouri Botanical Society in St Louis, Missouri, Avinoam Danin, a botany professor at the Hebrew University of Jerusalem and a leading authority on the flora of Israel, along with Uri Baruch, a pollen specialist with the Israel Antiquities Authority, reported that the combination of pollen spores lodged in the Shroud's surface, as well as floral images mysteriously "imprinted" on the face of the cloth, could only have come from plants growing in a restricted area around Jerusalem.

Pollen identification is a common method used in criminal forensics to determine where an object has been geographically. Max Frei, a Zurich criminologist, had previously identified a total of 58 different pollens on the Shroud from the area around the 1) Dead Sea and the Negev, 2) the Anatolian Steppe of central and western Turkey, 3) the immediate environs of Constantinople, and 4) Western Europe. Danin and Baruch confirmed much of Frei's work. They also confirmed some previous floral image identifications by Oswald Sheuermann, a German physicist, and Alan Whanger, a professor at Duke University.

The most significant plants that Danin and Baruch identified and reported on are:

***Chrysanthemum coronarium:*** *This is one of the most prominent plant images on the Shroud. It is not a very strong geographical indicator in that it is a widespread Mediterranean species. It is, however, a good temporal indicator since*

it blooms between March and May. This suggests that the image was formed at that time of year.

**Zygophyllum dunosum:** This is the second most prominent floral image on the Shroud. The phonologic stage of bloom, as seen on the Shroud, indicates that it was cut or picked sometime between December and April. This plant grows only in the Sinai, a small area of Jordan adjacent to Israel, Jerusalem, and an area of Israel south of Jerusalem.

**Gundelia tournefortii:** In addition to faint imagery, there are also a very significant number of pollen spores for this species on the Shroud. Such large quantities of pollen grains, of this otherwise insect-pollinated plant, can only be explained by physical contact with the Shroud. *Gundelia* blooms in Israel between March and May. This plant also grows throughout Turkey, Syria, northern Iran, northern Iraq, and in northern Israel. The southernmost edge of its growing region is Jerusalem.

**Cistus creticus:** Numerous pollen grains tend to confirm a fuzzy image of this plant on the Shroud's surface. This is considered a very high geographic indicator since it only grows in Israel along the Mediterranean coast areas and the higher elevations east of the coast, but only as far in that direction as the old city of Jerusalem.

**Capparis aegyptia:** This plant grows only in Israel, Jordan, and the Sinai. According to Danin and Buruch, "Flowering buds of this species begin to open about midday, opening gradually until fully opened about sunset. Flowers of this species, seen as images on the Shroud, correspond to opening buds at three to four o'clock in the afternoon."

The last four plants on the Shroud are significant because, as Danin and Baruch report, "[the assemblage] occurs in only one rather small spot on earth, this being the Judean mountains and the Judean Desert of Israel, in the vicinity of Jerusalem."

## Travertine Aragonite

Joseph Kohlbeck, Resident Scientist at the Hercules Aerospace Center in Utah, and Richard Levi-Setti of the Enrico Fermi Institute at the University of Chicago, examined embedded dirt particles taken from the Shroud's surface. The dirt was found to be travertine aragonite limestone. Using a high-resolution microprobe, Levi-Setti and Kohlbeck compared the spectra of samples taken from the Shroud with samples of limestone from ancient Jerusalem tombs.

The chemical signatures of the Shroud samples and the tomb limestone were identical except for some minute fragments of organic cellulous linen fiber that could not be separated from the Shroud samples. Kohlbeck acknowledges that this is not absolute proof that the Shroud was in Jerusalem and that there might be other places in the world – though none are known and it is statistically unlikely any will be found – where travertine aragonite has the identical trace chemical composition.

## **Textile Studies**

Methchild Flury-Lemberg, a leading authority on historic textiles and the former curator of Switzerland's Abegg Foundation Textile Museum, has reported strong similarities between the Shroud's fabric and fragments of cloth produced in the Middle East about 2,000 years ago. According to Flury-Lemberg, the cloth's finishing, its selvage, and a very distinctive joining seam, all closely resemble unique ancient textiles found in tombs of the Jewish palace-fortress Masada. The Masada fabrics have been reliably dated to between 40 BCE and 73 CE. Flury-Lemberg's detailed analysis of the Shroud's fabric – an exceptionally fine quality, z-twist, 3-over-1-herringbone patterned linen cloth – is evidence that it was manufactured in the Middle East on a Roman-period Egyptian or Syrian loom.

The unique, nearly invisible seam is particularly interesting and telling. The seam is about 8 centimeters from one edge. It appears that the cloth was cut lengthwise to remove some of the fabric's width and then expertly and very distinctively seamed in a way that preserved the selvage (the finished edges produced on the loom). This nearly invisible style of seaming is consistent with the Masada fabrics and is unknown in medieval Europe.

Previously, Gilbert Raes, of the Ghent Institute of Textile Technology in Belgium, identified the herringbone twill as a pattern that was common in the Middle East during the first century. Raes had also discovered that the Shroud's fabric contained, within the weave itself and thus possibly introduced on the loom, microscopic traces of a Middle East cotton variety known as *Gossypium herbaccum*. The evolving Talmudic traditions (Mishna) permitted linen to be woven on looms used for cotton but never on looms used for wool. While loose wool and even twentieth century nylon fibrils have been found on the Shroud, no wool has been found woven into the cloth as would likely be the case for looms in medieval Europe. Because the wool and the nylon are loose, they are likely contaminants. Flury-Lemberg's and Raes' evidence strongly suggests that the fabric of the Shroud of Turin is a Middle East fabric used in Israel around the time of Jesus.

## **The Image of Edessa**

Historians have long known about an ancient cloth bearing an image of Jesus. This cloth was known as the Image of Edessa, the Edessa Cloth, and later in the Byzantine era as the Holy Mandylion. Edessa was a cosmopolitan city in Jesus' day and one of the cities where Christian communities developed early as they did in Antioch. Edessa, now the city of Urfa in modern day Turkey, is situated about 400 miles north of Jerusalem. We can be quite certain that this ancient cloth, which disappeared during the sacking of Constantinople in 1204 by soldiers of the Fourth Crusade, is the Shroud of Turin.

Legend has it that the cloth was brought to King Abgar V Ouchama of Edessa (13 – 50 CE) by one of Jesus' disciples known to us as Thaddeus Jude (Addai). We know of

this legend from Eusebius of Caesarea's early fourth century *Ecclesiastical History*. Therein, we learn of a now lost document once in Edessa's archives purportedly written by King Abgar V and delivered to Jesus by an envoy named Ananias. Abgar, supposedly, asked Jesus to come to Edessa and to cure him of leprosy. Eusebius' history reports that the Apostle Thomas did send Thaddeus Jude sometime after Jesus' death and that he founded a church in Edessa. Historians are highly critical of this legend since Eusebius's history includes, as elements of the letter, references from the Gospels, which were written later, as well as theological concepts, which were developed later. It also must be pointed out that Eusebius makes no mention of the cloth.

Another Syrian manuscript, the *Doctrine of Addai*, fills in some gaps. According to this document, which also mentions the letter, Ananias painted a portrait of Jesus "with choice pigments." A later document, the *Acts of the Holy Apostle Thaddeus*, written in the early part of the sixth century, adds more detail. It suggests that the image was formed when Jesus wiped his face on the linen cloth and it refers to the Edessa Cloth as a tetradiplon. We can only assume that this is all legend. But from this material we can gather three very important clues:

- 1) The cloth arrived in Edessa.
- 2) The image on the cloth is recognized to be unique in that the images were described as painted with *choice pigments* or formed when Jesus *wiped his face* on the linen cloth.
- 3) The cloth is described as a *tetradiplon*, which means doubled in fours. When folded thus, only the face from the Shroud will be visible.

Regardless of how the image-bearing cloth arrived in Edessa, it was discovered in the early sixth century concealed behind some stones above one of the city gates. It was a practice in ancient cities of this area to mount a stone tile with a picture of some favored deity above the city's main gate. It may be that the Image of Edessa was simply stored behind such a tile as suggested by some Byzantine iconography. It could well have been that because of severe floods, to which Edessa was very prone; the cloth was placed high in the city's walls for protection. There is also the very real possibility that it was hidden to protect it from invaders or to protect it during times of Christian persecutions. We know that during the many persecutions of the first three centuries, valuable relics, writings, and ceremonial items of the church were routinely destroyed. There is evidence of local persecutions in Edessa as early as the latter part of the first century and of Roman persecutions that persisted until the time of Emperor Constantine. If, in fact, the cloth was taken to Edessa in the earlier part of the first century, it might have been hidden for protection as early as the reign of Ma'nu VI, Abgar's son, who is thought to have reverted to paganism.

What is not legend, nor speculation, is that the cloth, with an image of what was then believed to be a true and miraculous facial image of Jesus – described as a divinely wrought image and an image not made by hand – was found in the walls of the city in the sixth century. During repairs of the city walls in 525 CE, or more likely, during a Persian

invasion of the city in 544 CE, the cloth was rediscovered and placed in a church built especially for it. It was, to the people of Edessa, the lost cloth of the “legend.” In the late sixth century, Evagrius Scholasticus’ *Ecclesiastical History* mentions that Edessa was protected by a “divinely wrought portrait” (acheiropoietis) sent by Jesus to Abgar. In 730 CE, St. John Damascene in *On Holy Images* describes the cloth as a himation, which is translated as an oblong cloth or grave cloth. This may be the first mention, among extant documents, of it being a grave cloth.

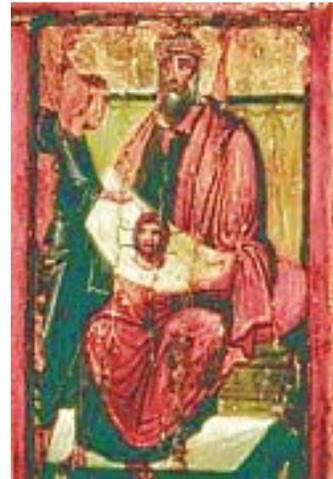
In 944, Emperor Romanus I sent an army to remove the Edessa Cloth and transfer it to Constantinople. There are many references to it after 944. In 1080, Alexis Comnenus of Constantinople sought assistance from Emperor Henry IV and Robert of Flanders to protect some of the city’s relics including “the cloth found in the sepulcher after the resurrection.” A Roman codex in 1130 speaks of the cloth “on which the image, not only of My face, but of My whole body has been divinely transformed.”

We know that the crusaders looted the treasures of Constantinople and carried away many riches and relics. The Edessa Cloth disappeared along with other priceless treasures. There is some evidence that suggests that the Edessa Cloth, then known as the Holy Mandylion, was taken to Athens. About a year after Constantinople was plundered, Theodore Ducas Anglelos wrote in a letter to Pope Innocent III:

*The Venetians partitioned the treasure of gold, silver and ivory, while the French did the same with the relics of saints and the most sacred of all, the linen in which our Lord Jesus Christ was wrapped after His death and before the resurrection. We know that the sacred objects are preserved by their predators in Venice and France and in other places.*

In 1207, Nicholas d’Orrante, Abbott of Casole and the Papal Legate in Athens, wrote about relics taken from Constantinople by French knights. Referring specifically to burial cloths, he mentions seeing them “with our own eyes” in Athens.

There is significant evidence that, in Edessa and also in Constantinople, the cloth was kept folded in such a way that only the face was visible. By folding the cloth, doubled in fours (tetradiplon) that is exactly what results – a centered face of Jesus on a horizontal folded cloth – as seen in a 10<sup>th</sup> century painting of Abgar V holding a picture that is odd for its horizontal shape as a portrait. In Constantinople, the cloth was sometimes ceremoniously unfurled, raised up like a vertical banner, in a way that showed a full frontal picture of Jesus as though rising from a grave. In 1201, Nicholas Mesarites, the sacristan of the Pharos Chapel where the Image of Edessa was kept, wrote: “Here He rises again and the sindon [=Shroud] ... is the clear proof ... still smelling fragrant of perfumes, defying corruption because they wrapped the mysterious naked dead body from head to feet.”



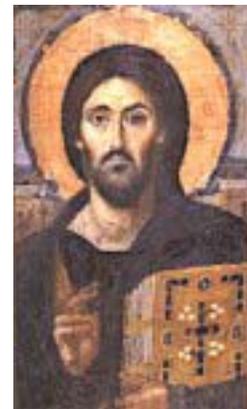
John Jackson, who was one of several physicists who physically examined the Shroud in 1978, used special raking light photography to reveal ancient fold marks on the Shroud. He found persistent creases exactly where expected and in the correct folding direction for just such a tetradiplon folding.

The textile evidence, the pollen and floral images, the travertine aragonite limestone, and the Sudarium; all of these suggest the cloth's origin in Jerusalem from where its historical journey may have begun. But there is more to the pollen story that corroborates its journey. As would be expected, there are pollen grains that place the Shroud in Western Europe. It has been in Europe since the mid-fourteenth century. At times it was exhibited at open-air festivals and even carried into battle by medieval knights. But there are also some pollen spores that place the Shroud in the environs of both Constantinople and Edessa. This is important information that suggests that the Shroud of Turin was likely at these locales. It is more evidence that the Shroud of Turin is indeed the Image of Edessa.

## Jesus in Art

There are no descriptions of Jesus' appearance in the New Testament. Nor are there any reputable descriptions in any known early Church sources. St. Augustine of Hippo made a point of this when he wrote his monumental works in the fifth century. Yet, starting in the sixth century a new common appearance for Jesus emerged in eastern art. We see it today in hundreds of icons, paintings, mosaics, and Byzantine coins. This common quality seems to have started in the Middle East about the same time that the Image of Edessa was discovered. Prior to this time, images of Jesus were mostly of a young, beardless man, often with short hair, often in story-like settings in which he was depicted as a shepherd.

Abruptly, throughout the Middle East, and eventually throughout eastern Mediterranean Europe, depictions of Jesus became full frontal portraits with distinctive facial characteristics. Jesus now had shoulder length hair, an elongated thin nose, and a forked beard. Numerous other characteristics appeared in these portraits and some of them were seemingly strange and of no particular artistic merit. Many portraits had two wisps of hair that dropped at an angle from a central parting of the hair. Many works showed Jesus with large "owlish" eyes. Paul Vignon, a French scholar, who first categorized these facial attributes in 1930, also described a square cornered U shape between the eyebrows, a downward pointing triangle on the bridge of the nose, a raised right eyebrow, accents on both cheeks with the accent on the right cheek being somewhat lower, an enlarged left nostril, an accent line below the nose, a gap in the beard below the lower lip, and hair on one side of the head that was shorter than on the other side.



Jennifer Speake who wrote a chapter, “Jesus in Art,” in J. R. Porter’s *Jesus Christ: the Jesus of History, the Christ of Faith*, observed:

*Famous relics that claim to bear the true imprint of Christ’s features include the controversial Shroud of Turin and the Holy Mandylion of Edessa; the iconography of both of these promoted the now conventional image of Jesus as a bearded man.*

Keep in mind that the Shroud of Turin and the Holy Mandylion of Edessa are very likely one in the same. And keep in mind, too, that this iconography started some six centuries before the carbon-14-determined date for the Shroud.

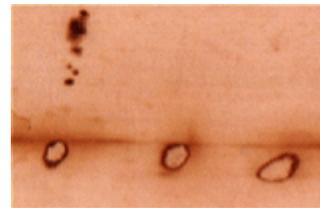
Now with modern image analysis technology we can clearly see that the portraits in numerous works of art are most probably sourced from a single image and those pictorial characteristics are those found on the Shroud of Turin. Some most notable and telling portraits include:

- Christ Pantocrator, an icon at St. Catherine’s Monastery in the Sinai (550 CE)
- Byzantine Justinian II solidus, a coin (695)
- Icon of Christ at St. Ambrose, (now in Milan) (700s)
- Christ Enthroned, a mosaic in the narthex of Hagia Sophia Cathedral (850 – 900)
- Christ Pantocrator, a dome mosaic in a church in Daphni (1050 – 1100)
- Christ the Merciful, a mosaic icon now in a Berlin museum (1000s)
- Christ Pantocrator, an apse mosaic in Cefalu Cathedral, Sicily (1148)

The Chrysanthemum image found on the Shroud is particularly significant. What makes this so is not just the prominence and clarity of the image on the Shroud, but the fact that this flower is depicted accurately, as to its likeness and relationship to the face, on some early icons and coins. This includes the Pantocrator icon at St. Catherine’s Monastery and the seventh century Justinian solidus coin.

## **Poker Holes**

They are often called the poker holes because some have speculated that L-shaped patterns of burn holes on the Shroud were created by someone thrusting a hot poker through the Shroud. The speculation is that this was some sort of “test by fire” to ascertain the Shroud’s authenticity. That seems fanciful and there is no good basis for imagining that this is how the holes were formed. But they are burn holes. The cloth was folded in half lengthwise and again in half to half its width when the burns were made. This is evident as there are four matched mirrored repetitions of the holes showing progressive levels of burn penetration. Each pattern has four burn marks or holes.



It is more probable that the burns were caused by a careless thurifer who may have accidentally sprinkled some granules of burning incense onto the Shroud. However the burn holes came about, it did not happen in a devastating fire in Chambéry in 1532 when

the Shroud was severely damaged by molten silver dripping onto it from its storage reliquary. We know that because a copy of the Shroud, the *Lier Shroud* painted in 1516, possibly by Albrecht Durer or Bernard van Orley, clearly shows the burn holes.

But there is a far more interesting and older picture of the burn holes. In the Budapest National Library there is an ancient codex, known commonly as the Hungarian Pray Manuscript or Pray Codex, named for György Pray (1723-1801), a Jesuit scholar who made the first detailed study of it.

This codex was written between 1192 and 1195. An illustration, one of five in the manuscript, shows Jesus being placed on his burial shroud, a shroud with the identical pattern of burn holes found on the Shroud. The artist has drawn the very unusual herringbone weave on the shroud and a number of other graphic characteristics consistent with the Shroud. Jesus is shown naked with his arms modestly folded at the wrists, the fingers are unusually long in appearance as they are on the Shroud, and there are no visible thumbs. There are no thumbs visible in the images of the man of the Shroud either. Forensic pathologists tell us that this makes sense since nails driven through the wrist would likely cause the thumbs to fold into the palms. In the drawing, there is also a clear mark on Jesus' forehead where the most prominent 3-shaped bloodstain is found on the forehead of the man of the Shroud. There can be little question that this illustrator of the Pray Codex, far removed from France – working at a time before the sacking of Constantinople by French knights, before the time given for the Shroud by carbon 14 testing, and before or the d'Arcis Memorandum – knew about the Shroud, the Holy Mandylion, the Image of Edessa.



Given all of this scientific and historical evidence, many think that there can be little doubt that the Shroud is the real thing, the burial cloth of Jesus. But it isn't that easy for some of us.

## Galileo's Problem

Galileo thought that he could convince church authorities and particularly Cardinal Bellarmine, by evidence and mathematics alone, of the correctness of Copernicus' heliocentric model of the earth circling the sun. He was wrong. Ultimately, Galileo's belief in the Copernican theory would lead to house arrest and being silenced by the Inquisition. It wasn't that Bellarmine didn't understand science or appreciate Galileo's work. He did. Bellarmine was trained in science but gave it up when he encountered contradictions with the prevailing theologically-derived worldview, which included the Aquinas model of the sun and all heavenly bodies circling a stationary round earth. Bellarmine trusted his worldview. We all trust our own worldview. Today's prevailing worldview thoroughly infused with science, objective history, and the logic of Western philosophical thought, is very different. But our response to it is just the same.

We trust whatever our worldview is and we intuitively trust whatever we hear or read that resonates with it. It is our view of the way things work in the world: the way things are and the way things have been. It may well be, at least in the Western world, that we are intellectually conditioned to be skeptical of the Shroud by the largely-shared, modernistic worldview. The Shroud just doesn't make sense to many of us. Dead men, after all, don't normally leave images of themselves on burial cloths. And, we know only too well that Medieval Europe was rife with fake relics. We suppose, without much thought, that the Shroud must be just another fake relic. And so we doubt that the Shroud is authentic. It just doesn't make sense.

In a book he coauthored with N. T. Wright, *The Meaning of Jesus*, historian Marcus Borg describes this prevailing worldview as the "worldview of mass culture in the West" and he explains – I think very correctly – how it works:

**Borg:** *Like all worldviews, it functions in our minds almost unconsciously, affecting what we think possible and what we pay attention to. It is especially corrosive to religion. It reduces reality to the space-time world of matter and energy, thereby making the notion of God problematic and doubtful. It reduces truth to factuality, either scientifically verifiable or historically reliable facts. It raises serious doubts about anything that cannot be accommodated within its framework, including religious phenomena such as prayer, visions, mystical experiences, extraordinary events, and unusual healings.*

To many people, to think that the Shroud is real is simply incredulous. We don't need proof; we just know it. We don't need information; our worldview is all the information we need. We don't need to think about it because worldview prejudices. We are, all of us, well practiced in the art of worldview nullification. Borg points out that religious phenomena are not easily accommodated to the modern view of reality. C. S. Lewis said something similar in his book *Miracles*. He wrote: "Nothing arbitrary, nothing simply 'stuck on' and left unreconciled with the texture of total reality, can be admitted."

But we need not limit worldview nullification to phenomena or miracles. It is every bit as applicable to the unexplained, mystery, enigma and anything that is implausibly strange. It is by our worldview that many of us may think that people who take the Shroud seriously – Shroudies they are called – are like people who sit beside Scotland's Loch Ness waiting for a glimpse of Nessie, the water monster first *encountered* by St. Columba in 565 CE. We may think that Shroudies are like those who traipse about the English countryside searching for crop circles in farmer's fields, and then upon finding one, examining it with all manner of divining paraphernalia looking for extraterrestrial origin or mystical meanings. Shroudies, we may think, are like people who flock to a New Jersey backyard to see a molded-plastic statue of Mary that weeps (for ticket holders only). Shroudies, we may suppose, are like people who see in the shadows and highlights of an official NASA photograph, a gigantic human face on Mars. We might wonder if Shroudies are not as nutty as the people who really believe that the earth is flat.

The modern worldview that Borg describes is resonant with newspaper headlines that declare that the Shroud is a fraud. It inclines us to trust a news anchor on Fox News

(ironically, the network with the motto ‘We report, you decide’) when she says: “Many people believe that the Shroud is Jesus’ burial cloth, but scientists say no way.”

Intuitively, we trust what we think we know about science. For instance, we know that carbon 14 testing is regularly used for testing all manner of artifacts and so it must be right. We intuitively trust *Nature*, the very prestigious science journal, the British Museum, and three radiocarbon dating laboratories associated with academic institutions. We don’t think about it. We trust that they know what they are talking about when they “*prove*” that the Shroud is medieval.

We also intuitively trust what we think we know about history. The first historically reliable documented record of the Shroud dates from 1356. We can trace the cloth’s history, year by year, owner by owner, and place by place from that date forward. Any historical record before that date is a bit loose (which, by the way, was not uncommon for that time in history). Luther and Erasmus complained about fake relics. We think; it must be medieval.

We intuitively trusted *Biblical Archeological Review*, when in the November-December 1998 issue; it carried two articles on the Shroud. One by Walter McCrone merely restated his findings of paint particles and his conclusion that it was a painting. The other by Gary Vikan, the Director of the Walters Art Gallery in Baltimore, Maryland, revisited the carbon 14 dating, the d’Arcis Memorandum, and argued that the Shroud was produced for the lay brotherhoods of Francis of Assisi . . .

**Vikan:** . . . *that his piety and his cult of self-mortification engendered. These Christians appreciated and understood Jesus’ wounds in a very physical way. This is the world of the holy shroud; these are the people for whom it would have held special meaning; and these, certainly, are the people for whom it was made . . . these medieval Christians would have understood that the nails must have gone through Jesus’ wrists in order to hold the body to the cross (although in medieval art these wounds are invariably in the palms). And their cult images would match this physical understanding of crucifixion, even to the point of adding human blood . . . All of which is to say that the indication of nail holes in the wrists and what some claim is the presence of blood on the linen need not add up to a miracle.*

Is there any basis for this claim? The best Vikan can do is to assume that medieval penitents are comparable to modern-day Spanish American Catholic penitents in New Mexico who practice self-mortification and self-crucifixion, very much incorrectly. He also claims in his article that there are many images like those of the Shroud. That is true if we allow for paintings that are not negatives, are not terrain maps that produce 3D isometric plots, and are not on Masada-like linen with forensic evidence of pollen and travertine aragonite from the environs of Jerusalem. Vikan is right if we also ignore the medically accurate bloodstains and images resulting from inexplicably caused chemical changes to the linen.

It is interesting to note that in a preface to the Vikan article, the editors of *Biblical Archeological Review* acknowledged the problem with the mysterious images and some of the forensic pathology. They wrote:

**Biblical Archeological Review:** . . . although radiocarbon tests have dated the shroud to 1260-1390 A. D., no one has been able to account for the shadowy image of a naked 6-foot-tall man that appears on the shroud. With bloodstains on the back, wrists, feet, side and head the image appears to be that of a crucified man. The details - the direction of the flow of blood from the wounds, the placement of the nails through the wrists rather than the palms - displays a knowledge of crucifixion that seems too accurate to have been that of a medieval artist.

The real keystone of Vikan's argument was a simple appeal to common sense. And because it may resonate with our worldview, we intuitively trust his polemics. He imaginatively and fictively quotes students of the Shroud and then interprets what they think:

**Vikan:** *'It doesn't look like any known work of art,' they say. The implication is that its creation was somehow miraculous, perhaps caused by a sudden burst of cosmic energy as the cloth came into contact with the dead body of Jesus.*

We intuitively trust him though there is no truth in this statement. In fact, most shroud researchers, to their credit, avoid metaphysical or supernatural interpretations and stress the point that science and objective history cannot provide such explanations. Most students of the Shroud are highly critical of those few who posit unfounded hypotheses to support a miracle.

The Shroud is very probably the most studied artifact in all of history. Those who study it are not, as some skeptics charge, religious fanatics or over zealous Christian apologists. Many of them believe in miracles and many of them do not. Many of them are not Christian. A fair number of them are Jewish. Some are agnostics. Those that are Christian span the full spectrum of progressive-liberal to conservative theological and Christological thought. They include Roman Catholics, Anglicans and Episcopalians, Lutherans, Methodists, Presbyterians, Baptists, and Evangelical Christians.

They include archeologists, historians, chemists, physicists, botanists, palynologists, forensic pathologists, image analysts, art historians, textile experts, and technical photographers. Most of them are from leading academic institutions or from prestigious scientific establishments including the Los Alamos Laboratory, the Sandia Labs, the Israel Antiquities Authority, the Jet Propulsion Laboratory, and the Enrico Fermi Institute at the University of Chicago. Their work, which is well documented, formidable in detail, and much of it carefully peer reviewed, warrants consideration. Most of the researchers who have studied the Shroud extensively, conclude, that at some level of understanding, it is authentic.

Yet the myth persists that the Shroud has been proven to be medieval. Dom, you said that it was your best understanding that it was a medieval relic-forgery. Some skeptics will say that it has not been proven that the carbon 14 tests are false. That is true. They may not be scientifically definitive and are suspiciously inaccurate, but they have not been proven wrong. Skeptics will argue that Pierre d'Arcis has not been proven a liar. That is also true. But what are we to make of all the contradictions, the preponderance of other evidence? Can we simply ignore the fact that the fabric of the Shroud is very likely

an ancient cloth like those found at Masada? Can we simply ignore the pollen and dirt that forensically links the Shroud to the environs of Jerusalem, Edessa and Constantinople? Can we simply ignore the Sudarium? Is the history that offers possibilities that the Shroud is authentic simply to be ignored?

Bertrand Russell in *Problems of Philosophy* described the problem of contradiction as it relates to “our immediate experience,” our worldview:

**Russell:** *In daily life, we assume as certain many things which, on a closer scrutiny, are found to be so full of apparent contradictions that only a great amount of thought enables us to know what it is that we really may believe. In the search for certainty, it is natural to begin with our present experiences, and in some sense, no doubt, knowledge is to be derived from them. But any statement as to what it is that our immediate experiences make us know is very likely to be wrong.*

We need not think that there is something miraculous or even religious about the cloth to accept that it is authentic. Yet we must realize that so long as the images remain unexplained, the opportunity exists, for all whose worldview accommodates miracles – what C. S. Lewis calls “rare exceptions to the laws of nature” – to imagine miraculous explanations. We might think that the images are somehow a byproduct of the miracle of resurrection. For those whose worldview does not include the likelihood of miracles, it is at least fair to say that the Shroud is, seems to be, or could be authentic and the images are simply an unexplained phenomenon, perhaps the result of some unrealized naturalistic process.

“Only a great amount of thought enables us to know what it is that we really may believe,” says Russell. Part of that process must be to examine and fully understand the contradictions. Part of that process should also be to understand and test the reliability of our own individual worldview.

## **How well do some of us understand history?**

At the time of the 1988 carbon 14 tests, when an Oxford researcher commented that anyone who now believed that the Shroud was real must be a member of the Flat Earth Society, there really was a Flat Earth Society.

The Flat Earth Society was, and still is, a worldwide organization with a few hundred members, headquartered in Lancaster, California. The worldview of its members is rooted in the tenets of the Universal Zetetic Society, which flourished in England in the 19<sup>th</sup> century. Charles K. Johnson, its president in 1988, had, as he saw it, “reduce[d] truth to factuality, either scientifically verifiable or historically reliable . . .” His history was right out of the King James Bible and from a collection of highly imaginative conspiracy theories, mostly in his head. “It’s the Church of England that’s taught that the world is a ball,” proclaimed Johnson. “George Washington, on the other hand, was a flat-earthier. He broke with England to get away from those superstitions.” What is true, at least, is

that in the late nineteenth century, a Yorkshire Church of England vicar, the Rev. M. R. Breshner, was so horrified by the Zetetic movement that he went about England strenuously arguing that the world was certainly round, like a ball.

Johnson and his wife Marjory wanted to scientifically verify the claims of Samuel Birley Rowbotham, a founder of the Zetetic movement who wrote *Zetetic Astronomy: Earth Not a Globe*. To do so, they carefully examined the surfaces of Lake Tahoe and saw no curvature. This satisfied them that Rowbotham's *scientific* conclusions were correct and that the world was indeed flat.

Marjory Johnson, who came to California from Australia, was so upset that her native country was called "down under" that she swore out an affidavit stating that she had never hung by her feet in Australia. Though she probably did not know it, she had provided an answer to a question that Augustine of Hippo had pondered in *The City of God*: were there "men on the opposite side of the earth, where the sun rises when it sets to us, men who walk with their feet opposite ours."

Most of us – I hope most of us – know better. It doesn't take much knowledge of science and history to know that the world isn't flat. We might say that our own worldviews are better tuned to reality than those of the flat earthers. But, how much better do we know the truth?

There are some of us who believe that Columbus discovered America and demonstrated that the world was round. Perhaps, if we believe this; if this is part of our worldview, we are not as well educated about history as we should be – or perhaps we are victims of a bad education or cultural influences.

This misconception about Columbus is repeated every year throughout America when we celebrate Columbus Day. I remember a fifth grade class in which we reenacted Columbus' grand return to Spain. One lucky student, picked to play Columbus, explained that the world was round to the amazed Ferdinand, Isabella, and assembled bishops wearing cardboard mitres. Just this year, a Columbus Day parade on television featured a float with a costumed Columbus pointing jubilantly at a giant paper-maché globe, forming his arms into a big circle above his head and then pointing at his brain – miming for all, "Surprise. The world is round."

If we believe this about Columbus, if we believe that he discovered America and proved that the earth was round, it is also unlikely that we know that we have learned the wrong things. It has become part of our worldview. And unless we run into contradictions and are open to investigating them, we continue to believe it. And, it affects other things which we may believe.

Those of us who know better probably know that the Pythagoreans, as early as the 5<sup>th</sup> century BCE recognized that the world was round. Aristotle, Euclid, and others knew it too. In the second century CE, an entire school of astronomers and mathematicians in Alexandria, led by Ptolemy, knew the earth was round and even calculated the circumference of the earth with a surprisingly high degree of accuracy. Possibly, we also

learned that profoundly rearward Christian thinking suppressed, or at least forgot, that the world was known to be round. At least, that is what some historians tell us. For instance, the popular historian Daniel Boorstin, wrote in *The Discoverers: A History of Man's Search to Know His World and Himself*:

**Boorstin:** *A Europe-wide phenomenon of scholarly amnesia . . . afflicted the continent from AD 300 to at least 1300. During those centuries Christian faith and dogma suppressed the useful image of the world that had been so slowly, so painfully, and so scrupulously drawn by ancient geographers.*

Another popular historian, William Manchester, in addressing the matter of the world being thought flat, wrote in *A World Lit Only By Fire: The Medieval Mind and the Renaissance*:

**Manchester:** *During the long medieval night, Hellenic and Egyptian learning was preserved by Muslim scholars in the Middle East, where it was discovered by early Renaissance humanists.*

But this, too, is erroneous. Such wrongheaded thinking started with Antoine-Jean Letronne, an academic with strong anti-religious prejudices, a member of the Institut de France, the French Academy. In his 1834 work, *On the Cosmographical Ideas of the Church Fathers*, he clearly misrepresented the church fathers and their medieval successors as believing in a flat earth. Washington Irving, at about the same time, wrote the amazingly popular *The Life and Voyages of Christopher Columbus*. In it he convincingly tells the story of Columbus explaining to the incredulous Council of Salamanca that the world is not flat. Historians have bought into this and even today propagate the myth.

While it may be true that a segment of the population believed the world was flat, it was not because of Christian thought and dogma but because of simple folklore, much of it pagan. Few who thought the world was flat ever read *Topographia Christiana*, the absurd biblically-based description of the world by Cosmos, a sixth-century monk. Those educated enough to read his works, did not take him seriously. Arguably, much of the population just didn't think about the shape of the world at all – it wasn't important to most people who lived in small communities and never ventured more than a few miles from home. Those that did think about the shape of the earth were educated and actually understood that the world was round.

Clement, Origen, Ambrose and feet-opposite-ours Augustine all thought that the world was round. Thomas Aquinas when he wrote *Summa Theologica* spoke of a globe at the center of a universe encircled by transparent spheres holding the heavenly bodies. Aquinas was much into angels – his worldview – and so he thought that angels moved the heavenly bodies about the earth. Isidore of Seville, once a custodian of the Sudarium and one of the most gifted, influential and best read writers of medieval Europe, expounded on the ancient view of a round world. His compendiums of classical learning were read throughout medieval Europe for many centuries. Dante wrote of “our hemisphere” in *The Inferno*. The Venerable Bede described the earth as round “like a playground ball.”

Roger Bacon, we know, also knew that the world was round. We can be confident that the world was well understood to be round in the medieval court of King Ferdinand II and Queen Isabella of Spain. It was a well-known fact throughout all of Christendom.

Malformed perspectives and misunderstood history shape our worldviews. It makes dark ages of the Middle Ages. It helps sustain a feeling about an era when theologians debated how many angels could dance on the head of a pin. It is unlikely that they did so. This false idea seems to have originated with Isaac D'Israeli (1766-1848), the father of the great Prime Minister Benjamin D'Israeli. Isaac took great pleasure in lampooning the philosophy of Thomas Aquinas. Aquinas had wondered if an angel, in moving from one place to another, passes through the area *in between*. He also wondered if several angels could be in the same place at once. The myth of the dancing-on-a-pin question, it seems, was nothing more than D'Israeli's comical restatement of Aquinas' ruminations.

Malformed history also fuels a picture of an age of naiveté in which it is easy to suppose that anyone in the medieval era could be duped into believing anything, so long as the Church fostered false information. It is easy to suppose – believe – imagine – that anyone could be duped into thinking relics were real when they were not. It translates to our modern worldview that we should be suspicious of all relics that had an historical footprint in medieval times. How right are we in being suspicious?

I suspect that much of the reason we don't accept the possibility that the Shroud is real is because of its footprint in medieval Europe. Dom, just as you posit that Jesus was not buried because men like him who were crucified were usually not buried, even left on their crosses to be devoured by dogs, we can reconstruct a history of the Shroud from likely plausibility. Should we not, however, try to *stretch the envelope* of our worldview, just as Aquinas did when he wondered if angels can go from one point to another without going through the *in between*? Should we not wonder that, if the Shroud is really 2000 years old and that it is now in Turin, that it had to pass through the *in between*, which was medieval Europe. History that is far more credible than much of the history understood about Columbus seems to bear this out. If that is so, then Constantinople from 944 to 1204 was between Edessa and Europe. Perhaps Edessa was in between Jerusalem and Constantinople.

Unless we know that our worldview of history is absolutely correct, we should not let it rule what we will consider. And the same must be said for science, particularly science used by history. Most of us, when hearing that something has been dated by some scientific method assume that the results are definitive. It is the gospel truth. It is science, after all.

### **How well do some of us understand scientific dating?**

In 1965, Yale researchers discovered a map that was known to have been produced at least fifty years before Columbus' first journey to America. The map, which showed Vinlandia Insula, the Island of Vinland or Newfoundland as it is known today, was part

of a small medieval volume, the *Tartar Relation*. The *Tartar Relation* had originally been bound together with the Vinland Map and another medieval volume, the *Speculum Historiale*. Wormhole alignments between the map and both volumes clearly showed that they had been all bound together at one time. The *Tartar Relation* volume was reliably dated by contemporaneous references to the Katatas people (Mongols) who dominated one end of the Eurasian land mass. There were also references to a certain bishop of Gada and Greenland that further corroborated the dating.

The map was significant because it supported archeological finds of Norse landings in Newfoundland as well as medieval Icelandic chronicles, the *Graenlendinga Saga* and *Eirik's Saga*. The map was chronological proof that by the time Columbus made his famous journey of discovery, some people in Europe clearly knew about North America.



In 1972, Walter McCrone, who would later debunk the Shroud, examined some particles of ink and found titanium anatase, a material scientist discovered in the 1920s. He thus concluded that the map was a recent relic-forgery.

Several people doubted McCrone's conclusion including George Painter, the curator of ancient documents of the British Museum. In 1985, physicist Thomas Cahill, of the University of California at Davis, analyzed the map using a newly developed process, Particle Induced X-ray Emission, and found only minute traces of titanium anatase, amounts that were consistent with what would be expected in the common *green vitoral* ink of the 15<sup>th</sup> century.

As with the Shroud, McCrone had found the substances that he claimed were there. They are there. But they are there in amounts too miniscule to support his conclusions. Columbus, who did not discover that the world was round, did not discover America ahead of the Norsemen.

Yet, myths and doubts about the Vinland Map persist. Why? Because a scientist had *proven* it was a hoax and PBS television reported the results of McCrone's findings. There was very little reporting about the Cahill's later findings at Cal-Davis.

Carbon 14 testing is another scientific method that we intuitively trust. But field archeologists and historians, who regularly use radiocarbon dating, know only too well how anomalous radiocarbon dating results can be. They know that carbon 14 dating procedures are best used for testing organic archeological finds that have been left undisturbed and protected from the environment and people. That, of course, was not the case with the Shroud. Archeologists also know that it is important to obtain multiple samples at diverse places on an object to be tested, and then by statistical method determine a reasonable range of ages for the object. That also, was not the case with the carbon 14 testing of the Shroud.

Yet, even with ideal conditions, carbon 14 results are sometimes highly erroneous. In one test, living snails – at least alive until just before testing – were found to be 26,000 years old. In another test, a newly killed seal was found to have died in 700 CE. Bone tools made from caribou ribs were once found to be twenty-seven thousand years old while a core sample from the innermost portion of the same caribou bone was found to be only 1,350 years old. There is the unexplained mystery of Mummy number 1770 at the Manchester Museum in England that has wrappings that date 800 to 1000 years younger than the body they contain. Other mummy samples have demonstrated this same peculiarity in which cloth wrappings are measured to be newer than the bodies they contain. This could only make sense if the mummies had been rewrapped hundreds of years later. Egyptologist cannot support such supposition.

Sometimes, erroneous results in Carbon 14 testing remain inexplicable. In most cases adequate reasons for improbable dates are found. Contamination, not properly cleaned from samples, can seriously affect results. Sometimes, newer or older matter is introduced into samples, as was the case with the caribou bones that had absorbed chemically rich ground water.

In the case of the Shroud, three independent laboratories used a recently developed Accelerator Mass Spectrometry (AMS) method for measuring the date. AMS has proven to be an accurate measurement technology that does not require that large samples be burned, as was necessary with older radiocarbon dating methods. The labs used control samples to ensure proper calibration. The few anomalous results encountered during calibration were thought to be few enough to be within appropriate margins of error. Unfortunately, the labs used identical testing protocols, thus it was really only one test performed three times. They also used an identical unproven cleaning procedure on three snippets of cloth; regrettably all cut from a single sample. The single cutting was taken from a corner of the Shroud, which was probably the most contaminated part of the entire old dirty piece of linen, and one that had been mended with new thread.

Knowing all too well about such problems, archeologist William Meacham wrote in an essay entitled, *Radiocarbon Measurement and the Age of the Turin Shroud: Possibilities and Uncertainties*:

**Meacham:** *No responsible field archaeologist would trust a single date, or a series of dates on a single feature, to settle a major historical issue, establish a site or cultural chronology, etc. No responsible radiocarbon scientist would claim that it was proven that all contaminants had been removed and that the dating range produced for a sample was without doubt its actual calendar age. The public and many non-specialist academics do seem to share the misconception that C-14 dates are absolute.*

If we are to consider the authenticity of the Shroud, we must be willing to stretch the envelope of our worldview and we must be careful not to be selective with evidence on the basis of what fits our worldview.

In May of 1996, in an Episcopal Teleconferencing Network broadcast follow-up to Trinity Institute's "Jesus at 2000 Symposium" you, Marcus Borg, Luke Timothy Johnson, N.T. Wright, and Deirdre Good were exploring the topic of the Resurrection. As can be expected when you are present, the matter of Jesus' burial surfaced in the discussion. Tom Wright had just finished arguing that Jesus' was in fact buried. The conversation went as follows:

**Borg:** *But surely the reason that didn't happen amongst other reasons is that Jesus was a peasant and secondary burial in an ossuary simply didn't happen for peasants.*

**Crossan:** *That's expensive, Tom, that burial you're talking about.*

**Wright:** *It is expensive and the Gospels explain perfectly well how it happened. This is the trouble. It's very easy to reconstruct something if you take all the bits of evidence off the table and say, we don't believe any them, then of course you are free to tell any other story that you like.*

That may be a fair criticism of your argument that Jesus was not buried. It seems so, but I don't know. It is illustrative, however, of the problem with the Shroud. We cannot be selective with evidence and simply fall back on *best understandings*, then wonder about newly crucified models used to address but one of the contradictions. Of course, if the Shroud is authentic, then there is little argument left about whether or not Jesus was buried.

If we are to truly understand this historical artifact, we must look at the preponderance of evidence that contradicts worldview assumptions. We must consider all of it. We must weigh its significance. We must look for patterns of corroboration and examine all problems with any of the evidence. As I said at the beginning of this letter, there has been a paucity of fact-embracing skepticism on the Shroud. The skeptics are selective with the evidence and generally will not go beyond the carbon 14 testing, the d'Arcis memorandum and McCrone's finding of paint pigments. They may, like Vikan, offer speculative explanations but they don't address the contradictions. That is regrettable. The crime against Galileo was not that he was arrested or silenced. It was that his evidence, his contradictions, his conclusions were dismissed for no other reason than that they were incredulous to a prevailing worldview. You, Dom, took a step in the right direction in acknowledging the problem of the realism in the bloodstains and the images.

The Shroud is important because it challenges worldview thinking. It challenges what we may think we know historically about the passion sequence, Jesus' crucifixion and his burial. It potentially challenges what we may think about the resurrection. It challenges biblical scholarship and our modern day distrust of the Gospel accounts. It challenges two centuries of progress in the scholarly quest for the historical Jesus. It challenges the discourse on science and religion. And as Pope John Paul II states — a man keenly aware of intellectual dilemma — the Shroud of Turin "challenges our intelligence."

It may turn out that the Shroud is a medieval relic-forgery, as you suppose. It may be that the Shroud is authentic and that a perfectly natural explanation for the images eludes us for now. Absent such explanations, we may wonder: did something happen in the tomb? Did something happen within that linen Shroud? Did something happen that was so powerful that an image was translated to the cloth?

Historian Thomas Cahill, perhaps best known for his book, *The Gifts of the Jews* – (not to be confused with the physicist Thomas Cahill of Cal-Davis who disproved McCrone’s conclusions about the Vinland map) wrote in *Desire of the Everlasting Hills: The World Before and After Jesus*:

*Was this image impressed upon the cloth by the heat or light of new life? No laboratory will ever tell us, nor can any scientists give such questions a scientific answer. The questions are important, not because we can ever hope to answer them with human knowledge, but because they lead us to the ultimate question about Jesus: does his story make sense?*

*“The bread that I shall give is my flesh for the life of the world,” said the Johannine Jesus. We do not have to adopt the theology of substitution – the theory that God required a spotless victim to make up for human sin – to make sense of the crucifixion ... But Jesus’ suffering body is surely his ultimate gift, for it is his final act of sympathy with us...*

*When they come to Jesus, he seems already dead, so they do not break the bones of this Pascal Lamb without flaw. Just to be sure, however, “one of the soldiers pierced his side with a lance, and at once blood and water flowed out” – witnessed, writes John, “by the one who saw it,” the Beloved Disciple. This blood and water, the last drops of Jesus’ wracked body, seem to have flowed copiously, if we accept the visual testimony of that strange Fifth Gospel, the Shroud, which may have been a treasure of the church of the Beloved Disciple, the same church that treasured the evolving Fourth Gospel*

To be convinced, skeptical, or merely intrigued are all fair responses to becoming well informed about the Shroud of Turin. To not become well informed is to ignore one of Christianity's greatest mysteries and chance history to the whims of our worldview.

Dom, it is with utmost admiration for the contributions you make to the quest for the historical Jesus, that I am a fan of your work. I am respectfully yours,



Daniel R. Porter

### **A postscript:**

There are many things I have not dealt with in this letter. I have not addressed myself to all of the credible evidence, for it is just too voluminous. For instance, I have not

discussed the discoveries of mites on the Shroud which are indigenous to the Middle East. Nor have I discussed mineral encrusted pollen spores found on the back of the Shroud, which were likely formed by the damp cool surfaces of limestone caves or tombs. I have not discussed the discovery of a sliver of oak wood in the region of the back of the head on the Shroud. This is particularly interesting in light of the fact that pollen of an oak species, *quercus caliprimus*, specific to the Palestine area, was found on the Sudarium.

Other than recounting the legend of Abgar and Thaddeus Jude, I have not covered the subject of plausible possibilities for how the Shroud came to be in Edessa. It is a fascinating topic that merits serious historical investigation, one that may shed much light on early church history. Historian and Episcopal priest, Albert R. Dreisbach, has written an intriguing paper, "Thomas & the Hymn of the Pearl." It merits serious attention by historians and history buffs alike.

I have not covered many liturgical and ceremonial clues that add credence and understanding to the conclusion that the Holy Mandylion of Constantinople is the Shroud of Turin. Two papers, among others, warrant special attention:

- Scavone, Daniel C., "Greek Epitaphioi and Other Evidence for the Shroud in Constantinople up to 1204"
- Dreisbach, Albert R., "Liturgical Clues to the Shroud's History"

I have not addressed myself to the matter of the missing years between the sacking of Constantinople and the first showing of the Shroud in Lirey, France, some 150 years later. One theory is that the Shroud was in the hands of the Knights Templar, for at least many of those years. An interesting wood panel, attributed to the Templars, found in Templecombe, England, with a face much like the face on the Shroud, lends credence to this theory. Two books cover the subject well:

- Schwartz, Barrie M; Wilson, Ian, *The Turin Shroud: The Illustrated Evidence* (London: Michael O'Mara Books Limited, 2000)
- Wilson, Ian, *The Blood and the Shroud: New Evidence that the World's Most Sacred Relic is Real* (New York: Simon & Schuster, 1998)

I have avoided discussion of significantly disputed evidence, such as the observations of coins over the eyes of the man of the Shroud. The observations may be valid. There appears to be something over the eyes that in a 3D isometric rendering seem round and flat with the proportions of small coins. There is some discernable congruence of detail (like in matching finger prints) between bits of barely discernable image and two ancient coins, a Lituus lepton and a Juolia lepton. The lepta, minted in Palestine, were Roman produced coins for Jewish use. Parts of the inscription UCAI for TIBERIOU CAISAROS (in Greek as it would have been) seems to be almost visible. But it should have been UKAI. Was the C, where a K was expected, a misspelling? This was a

problem that seemed to preclude identification until an actual Lituus lepton was found with the aberrant spelling. Several have since been found. The congruence seems extraordinary. But there is a problem. The detail of the coins, discerned in some photographs of the Shroud, is too small to be captured accurately with the orthochromatic film that was used in the photographs. Later photographs, taken with finer grain film, do not reveal the same detail suggesting that the imagery could be random patterns caused by granules of silver compounds in the film's emulsion. Further research is warranted before this can be treated as definitive evidence.

It has been widely reported, and much disputed, that one cause of contamination in the carbon 14 testing may be microscopic organisms that attach themselves to ancient linen and other artifacts. It is argued that these organisms, which form a bioplastic film of newer material, may help explain why the linen wrappings of some Egyptian mummies test out much newer than the bodies they enshroud. Reportedly, quantities of these organisms were found on the Shroud. It has also been suggested that the documented cleaning procedures used by the radiocarbon laboratories would not have removed this contaminant. Raymond Rogers and others dispute this evidence. It may be, to some extent, that a bioplastic film is a contributing factor in skewing the carbon 14 testing; but, by how many years? More work is needed to solidify this theory before we should say it is a significant factor in the carbon 14 error.

Many useful scientific and historical papers and articles may be found, or links to them may be found, in the wonderful archives of Barrie Schwartz' Shroud of Turin Website (shroud.com). Some, such as the reprinted articles from *Biblical Archeological Review*, contain letters to the editor including some that were not published in the magazine. In addition, discussions and commentaries on scientific, historical and theological papers and books about the Shroud are to be found on the site. Schwartz' editorial policy is to publish responsible and meaningful material regardless of an author's position on the Shroud's authenticity. The site has a search engine which is useful in finding particular material. It may also be searched with the Google search engine by including *site:shroud.com* in any search argument (e.g. *site:shroud.com* coins, *site:shroud.com* blood, etc.).

The 1989 *Nature* article (which by the gracious permission of *Nature*, may be found on Schwartz' site) that claimed to the whole world that the Shroud was medieval because of carbon 14 testing was the most significant published paper about the Shroud in the last twenty-five years. It was the scholarly public statement of "proof" that the Shroud was medieval. It shaped the opinions of scholars, the media, and the public at large. The recent paper by Rogers and Arnoldi, "Scientific Method Applied to the Shroud of Turin: A Review," also available on the shroud.com site, deserves to be equally significant. It is conclusive and should be read.

Finally: In a personal email to me, Fr. Dreisbach wrote: "The conclusion of the moment seems to be that we have an accurate C14 date, but not of the Shroud proper – only of the medieval reweave." That seems true. Thus we are without a good argument for thinking the Shroud is medieval. Additionally, we have an overwhelming avalanche

of observations and empirical data that argues that the Shroud is not medieval. I imagine Galileo would agree.

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