

## SPECIAL FEATURE

### FOUR NEW THEORIES OF HOW THE SHROUD IMAGE MAY HAVE BEEN FORMED

#### Theory No. 1 - Some form of X-rays?

A thought-provoking new hypothesis from Dr. Alan Whanger

For many years Shroud researchers have been puzzled by the striking `X-ray appearance of certain features of the Shroud. In particular there seems a very skeletal appearance to the hands, as has been observed by, among others, Dr. Giles Carter and Dr. John Jackson in the U.S.A., and Dr. Allan Mills of Leicester University here in the U.K.

Now **Dr. Alan Whanger**, Professor Emeritus of the Duke University Medical Center in Durham, North Carolina, together with his wife Mary, both enthusiastic researchers on the Shroud since 1979, have taken the observation a step further. They have recently produced striking three-dimensional enhancements of the Shroud images by superimposing the positive and negative photographs, and moving them slightly out of vertical alignment. The effect of this is to reveal more detail than can normally be seen in a single photograph. And when they studied a 3-D enhancement of the Shroud hands, to their astonishment images of the bones of the fingers, the hands and the wrists showed up with quite unexpected clarity. Using their Polarized Overlay Technique, they then compared the 3D enhancements with X-rays of hands and a skull, finding what they call an autoradiograph, that is, an image derived from X-rays coming out from every part of the body to show up those parts of the skeletal system fairly close to the surface.

According to a press release issued by Dr. Alan Whanger on 29 March:

Even the individual wrist bones can be identified, and it is plain where the nail went through the wrist. The eye sockets, the nasal bones, the sinuses and about 20 teeth accurate in detail including the roots can be rather clearly seen. These findings have been reviewed by a number of physicians, *including three professors of radiology* [italics mine - Ed.], who all immediately agreed that this shows an autoradiograph. ... These new detailed images show clearly that the reason for the appearance of the very long fingers and of the wide eyes is the underlying skeletal image.

Assuming the validity of the Whangers' claims (and it would be helpful to know more about and from the professors of radiology), the mystery, clearly, is what could have been responsible for the body in the Shroud producing images from within itself. Dr. Whanger goes on in his press release:

Most of the physicists who have seen the evidence have said they 'have no explanation for it, but Dr. Thaddeus Trenn of the University of Toronto, Canada, theorized that enough energy was put into the atoms of the body to overcome the force that holds the nuclei together, producing what he calls 'weak dematerialization'. This would release the protons and neutrons in the nuclei and [cause?] the displacement of the electrons from

their orbits. The results of this would be the release of soft X-rays, the production of coronal discharge by free electrons, and the bombardment by neutrons of the ordinary carbon 12 and the nitrogen in the fabric.

As noted by Dr. Whanger, this latter bombardment postulated by Dr. Trenn is of no little importance since it 'would produce new carbon 14'. The effect of this, therefore, would be that in the case of any carbon dating the linen would appear significantly younger than its true age - exactly as arguably may have happened with regard to the Shroud. Dr. Whanger and his wife have therefore very neatly produced explanations both of how the Shroud image may have been formed, and how the carbon dating result may have been skewed, all rolled into one. The key issue is whether this explanation; any more than the several others advanced since 1988, will truly stand long-term scrutiny.

*Dr. Alan Whanger is Professor Emeritus of Psychiatry at Duke University Medical Center, Durham, North Carolina*

## **Theory No. 2: Does Radionics offer a Clue?**

*Norma Weller suggests some startling implications to the Shroud's blood serum stains ...*

**Norma Weller** writes:

In the reorganization of work on the Secondo Pia records regarding the 1898 photograph of the Shroud, the family deposited certain hitherto unpublished material at Turin's Museum of Sindonology. No less than seven additional photographic plates were discovered, and of these two, taken on 28 May 1898, proved of singular interest to me.

I decided to intensify these with colour to see what they would yield, and to my astonishment there were highly significant markings on the blood serum stains which seemed to indicate details of human anatomy such as the spinal cord and thorax. It was so remarkable as to stretch one's credibility to the limit, yet as an artist who has made a thorough study of anatomy, the structure was unmistakable and the challenge irrevocable.

It became imperative to procure a life-size image, and upon obtaining this, although it was now the Enrie rather than the Pia negative, it was large enough to see what was really present. And for me no longer was there any possible doubt about the Shroud's authenticity. What had begun as a neutral observation was now a matter of revelation and consuming importance. For here was not only the perfectly formed image of the body of a man purported to have died two thousand years ago left on his burial cloth, but also the marks of his very bones imprinted on the blood serum stains. Would this not indicate a radiation so intense as to penetrate even the inmost recesses of the human organism?

Thaddeus Trenn in his remarkable booklet *Why Science cannot cope with the Shroud of Turin* discusses the effects of soft X-rays as a possible explanation for the projected image. He also includes the counter-argument of Dr. Alan Adler, who stated that if this were so, it would have

been so radio-active it would have glowed in the dark! Having considered the implications of both viewpoints, they may be nearer the truth than they realise, for the images in the blood serum stains prove it. Yet this discovery poses the most impossible problem. For how could an image of a man appear both from inside and outside simultaneously? How could it both resemble a photographic negative of a full-length man on the outside, yet become an X-ray image in the blood stains.

Yet so it was, obliging us to ask ourselves what precedent had ever existed in science which could account for anatomical details being imprinted on blood by some kind of human radiation? Although it may stretch our credibility to the limit, such a precedent does indeed exist, and although it is unorthodox, it is one we cannot afford to ignore, since to do so may be to close the door on a vital key to the Shroud mystery.

For this we must journey back to 1950, to when an extraordinary and remarkably open-minded group of medical scientists attempted to explore the further reaches of psycho-physical energies via experiments with light and magnetism.

One experiment they chose was to try to remove all the photons out of light, separating the visible part of light from the invisible energy. For this purpose they devised an apparatus called a Heliotron with four 150 watt lamps directing light at four selenium plates. The principle involved was that if any invisible, unknown particles were present, these would be deflected from the plates at 45 degrees at an extremely high velocity through four pinholes in a box that was otherwise completely light-insulated. Inside this the same unknown particles were guided to an insulated circular magnet, also set at 45 degrees in order to deflect them downwards into a compartment containing a photographic plate. Before reaching the photographic plate the particles would be polarised by the polished surface of the magnet. Any object placed on the photographic plate would therefore produce an image if the emulsion would respond to the unknown particles.

The first plate was exposed in 1949. This was a nickel wire component which resulted in an image *closely resembling that of an X-ray photograph*. The next photograph was that of a lime tree leaf. But rather than a silhouette, it was the *inner tracery* of the leaf which appeared. The plates used for this leaf experiment were particularly interesting, for they were half-plate size reject X-ray plates from old stock being cleared by Boots the Chemist in Queen St., Oxford. And they had been coated with strontium. Unfortunately, only 156 plates were available, and could not be renewed. Furthermore the same phenomena were not repeated when ordinary Ilford quarter plates were used.

To me it appears significant that these plates were strontium coated, since this is a powerfully radioactive element, and has been quoted as being absorbed into linen, along with calcium and iron, during the traditional retting process of transforming flax into linen [see Ian Wilson's *The Evidence of the Shroud/The Mysterious Shroud*, O'Mara/Doubleday, p.91].

Some readers may recognise something familiar to these experiments, since they were formulated into a process known as the Delawarr camera, in turn linked with the practice of Radionics. Radionics practitioners Mrs. Lavender Dower and Leonard Corte helped me by

producing some extraordinary photographs of anatomical details simply from a blood sample that had been placed in a more advanced apparatus than that used for the first experiments. Again with the help of the Delawarr Laboratories in Oxford I received photographic material of a patient's spinal cord, derived simply from a blood sample.

What strikes me when I view these details of blood images derived from Radionics is that just like the projected details on the Shroud, they show the basic structural principle by which energy was emitted from the living organism. In one instance it was the serrated veins of a leaf - not the whole leaf, but the *energy prototype*. In the blood samples of the Shroud we see spinal column, thorax, vertebra and coccyx at the base of the spine. It deserves remark that for centuries Indian and oriental mystics have pointed to a serpentine flow of energy from the spinal cord as the source of man's inner power and life.

*Norma Weller is Lecturer in Fine Art at the University of Brighton, Sussex. The above is an edited extract from a much fuller and highly illustrated presentation 'Startling Implications of the Blood Serum Stains on the Shroud of Jesus' available for loan via the Editor.*

### **Theory No. 3: A Mediaeval Artist's 'Charcoal Burnishing' Technique?**

*A new hypothesis from University of Tennessee researchers Emily Craig and Professor Randall Bresee*

Forensic anthropologist Emily A. Craig, and Randall R. Bresee, associate professor of textiles and clothing, both of the University of Tennessee, have put forward a new theory of how a mediaeval artist may have created the Shroud image in an article in the January-February issue of the *American Journal of Imaging Science and Technology*. Emily Craig first became interested in the Shroud two years ago while attending a lecture on the forensics of textiles delivered by Bresee, during which Bresee encouraged his audience to come up with ideas of how a mediaeval artist might have produced such an extraordinary image. According to Emily, as interviewed for an East Tennessee newspaper:

"It was so simple. I went home and with a few things lying about the house, I duplicated the process."

In their *Journal* article, in which they acknowledge help from Dr. Walter McCrone and Joe Nickell, Craig and Bresee postulate that the mediaeval artist used powdered pigments to create an image on paper or vellum, then transferred it to the cloth with a wooden burnishing instrument, then set or 'fixed' this with the aid of heat. They claim that the techniques involved were well-known in the Middle Ages, as indicated by Cennino Cennini's 14th/15th century *Il libro dell'arte*, which 'includes instruction for grinding pigment into powder, brushing charcoal with feathers and burnishing an image onto cloth', also chapters 'containing specific instructions on "how to paint a dead man" and "how to paint wounds"'

By way of demonstration, Craig and Bresee's article includes an image drawn onto newsprint using a mixture of iron oxide and collagen dust, and a corresponding image as transferred onto

linen. They claim the virtue of these images over previous attempts at replication of the Shroud image is that they are 'rich in three-dimensional detail'.

From even the most casual perusal of their images, this description 'rich in three-dimensional detail' strikes one as, frankly, rich. Inevitably it is a subjective reaction, and the individual reader must make up his or her mind; but one is perhaps most reminded of some of the better artists' copies of the Shroud, such as the so-called Dürer in the Church of St. Gommaire, Lierre, Belgium.

But for a fuller appraisal of the Craig-Bresee hypothesis, we are indebted to the comments of professional artist **Isabel Piczek** of Los Angeles, still well-remembered for her highly illustrated talk to the BSTS just over a year ago.

### **Noted Los Angeles artist Isabel Piczek replies to the Craig Bresee Theory...**

The success of the described method incorporated in the new image making theory of Craig and Bresee wholly depends on an initial drawing created by the use of carbon dust transferred from paper to canvas with a burnishing spoon and steam. This initial drawing, in order to have the above described qualities of the Shroud, would have had to introduce a degree of draughtsmanship we cannot produce even today without the agency of modern photo methods underneath the drawing. In the Middle Ages that kind of draughtsmanship was non-existent. The initial drawing would have had to include an anatomical and medical knowledge which was barely touched upon even in the High Renaissance, and a profound biblical scholarship regarding early Christian writings, first century Jewish burial rites, Roman crucifixion methods in 1st century Judea, and a premonition about the results of recent archaeological excavations around Jerusalem.

The authors refer to Cennino Cennini's handbook on art (*Tratto della Pittura* by Cennino Cennini da Colle Valdelsa, 1437) and also to Theophilus Presbyter's book written most probably in the 12th century in Latin and translated in 1961 into English by Charles R. Dodwell, Oxford; under the title *The Various Arts*. The reference is made to these books in an obscure manner as evidence for the existence of the authors' technique in the Middle Ages. I have read and studied both these books. Neither one of them reveals any "dust transfer techniques" in art in the Middle Ages. We also have to remark that Theophilus Presbyter writes on early northern methods of art beyond the regions where something like the Turin Shroud could have been made, even if it would have been handcrafted as an art piece. Northern art did not develop nearly with the pace of the arts of the southern regions. If it isn't within the reach of the mediaeval Italian and French artists to have the draughtsmanship to draw the image of the Shroud, it is far less within the reach of the primitive northern artists of that period.

Regarding the history of the technology of art, there are similarly great difficulties with the Craig-Bresee theory. The hand-ground, coarse dry pigments of the Middle Ages would not lend themselves to achieve an image with the superb qualities of the Shroud image, especially when transferred to a coarse, unprepared linen with a herringbone weave, such as the Shroud. The image would greatly deteriorate and distort with the fine details absolutely lost. Also, the image of the Turin Shroud shows no light focus. Any artist-drawing does, always. Furthermore, it is

one thing to create just a face, as these researchers did, but it is quite another to carry the technique through a 14 foot length with a double image of a six feet tall man.

At the end, the Craig-Bresee paper refers to two paragraphs in Cennino Cennini's *Trattato della Pittura*: "How to paint a dead Man", and "How to paint wounds". The authors of the paper see a proof in these chapters that the Shroud could have been painted by a mediaeval artist. These texts cannot be taken out of context. They are part of many detailed instructions Cennini gives to his pupils, how to paint faces, old young, male female, how to paint fish, water, draperies of all sorts, etc. He speaks about panel painting and he makes some reference in these texts to walls also. Regarding painting a dead body, he recommends the use of verdaccio, which is a gentle green, light ochre flesh colors, white lead, and outlines with dark sinoper and a little black, "tempered" and this will be called "sanguine" says the master. As for wounds, he recommends to take straight vermilion. He instructs his pupils to shade all over this vermilion with "a little fine lac, well tempered in the usual way". Again, this cannot be taken out of the whole series of instructions. Earlier, he warns us several times that vermilion, exposed to sun, air and other paints, turns black. He does not therefore recommend it for murals on walls. In this chapter he speaks only about paintings on well prepared panels, kept indoors and not undergoing rough handling. He certainly does not speak about wounds painted with vermilion on raw canvas such as the Shroud. In the Middle Ages they did not execute paintings on raw, unprepared canvas.

'It was so simple', said Ms. Craig. In truth, there is nothing more complex than the Turin Shroud, and nothing more difficult than Shroud research. There is no simple solution to the mystery of the Shroud.

#### **Theory No. 4: 'Skin oil and pigments' - the Shroud replicated in Mexico?**

In 1990 the Mexican psychical researcher Cesar Tort, a member of the B.S.T.S., contributed an intriguing article for the *Journal of the Society for Psychical Research* [JSPR 56, pp.71-81]. Entitled 'The Turin Shroud, a case of retrocognitive thoughtography', this boldly suggested that the Shroud image was genuinely that of Christ, but also genuinely dated from the 14th century, in accord with the carbon dating. As opined by Tort; somehow the Shroud's image had been 'catalyzed' onto the cloth during that century by a process called 'thoughtography', or thought-projection; somewhat akin to the way a stigmatic assumes crucifixion wounds onto his or her own body.

Thankfully for those, like your Editor, still grappling to comprehend the very concept of 'thoughtography', Tort has now publicly set aside his hypothesis with an article 'Second Torts [sorry, Thoughts!] on the Turin Shroud' [*Journal of the Society for Psychical Research* 59, pp.367-9], while calling for fresh initiatives in replicating the Shroud image. With regard to the latter, Tort has sent three photographs of a replication apparently made by Dr. Enrique Rivero-Borrel, the President of the Mexican Centre of Sindonology. Tort writes:

I am impressed by the remarkable similarity of it and the original. Rivero applied a mixture of skin oil and pigments to a living man before wrapping him with the cloth. Since the original colour was so strong, Rivero washed the cloth, resulting in the image

you can see in the photos. Thereafter Rivero painted in the blood, the scorch marks and the water stains by hand. The face was not re-touched, except for the 'blood'. If the hair looks a little strange, this is because the man was wearing a wig.

For this Editor at least, the Rivero image is probably the best replication of the Shroud image produced so far, and certainly considerably better than the Craig-Bresee replication, also the Holger Kersten version to be discussed later in this *Newsletter*. Even so, if the Shroud image was artificially contrived something along these lines, getting an exact match remains still a long way off....