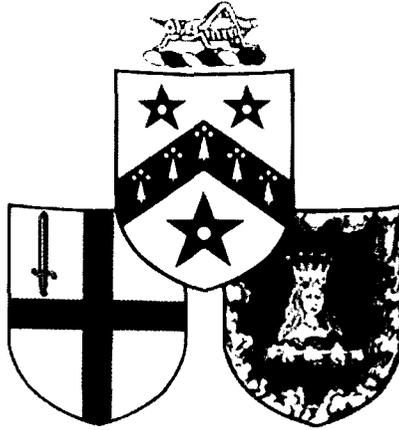


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THE TURIN SHROUD - AN UPDATE

A Lecture by

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THE TURIN SHROUD - AN UPDATE

I have been fascinated over the period of the last ten years, by the Turin Shroud, and by that haunting face, which has been so very frequently reproduced. I find myself now in November 1988 when the Shroud has been subjected to carbon fourteen testing, in some ways even more haunted by it, for reasons that I hope that will become clear towards the end of my lecture. I don't pretend to be a very profound or original sindonologist, which of course is the technical term for those who have taken up at great depth the study of the Shroud, sindonologist, that is the word to conjure with, but I was profoundly impressed not by the haunting face but also by the effect of the Shroud on somebody whose memory I greatly revere and somebody I was privileged to know. That person was Bishop John Robinson, perhaps more popularly known for his writing, 'Honest to God', which caused such a shock when it was published in the '60's, but who of course in many ways was a very conservative as well as a very scrupulous student of the New Testament. John Robinson was fascinated by the Shroud of Turin. He was a person of absolute intellectual integrity and great scrupulousness and I remember him saying on the last occasion we met, "Well, it interests and haunts me, but wait for the carbon fourteen test" and that was all that he would say.

In October 1988, the Cardinal Archbishop of Turin, Cardinal Balestero faced the press and gave the results which had been gained from tests at three laboratories. May I remind you that samples of the Shroud had been sent to a laboratory in Oxford, to one in the University in Arizona, and to the Federal Institute of Technology in Zurich. Those three laboratories and the carbon-fourteen test established that the Shroud had been woven in the medieval period. There is 95% certainty that the period of the creation of the Shroud was between 1260 and 1390 and this of course fits the historical evidence about the Shroud as we shall see. The Cardinal understandably rebutting the charges that the church had been obstructive all these years, when it came to establishing the historical truth about the Shroud said, "I see no reason for the Church to put these results in doubt" and he then added that the Shroud should be regarded as an icon and he promised that the further tests that we still await should be done, to determine how the man's image was actually imprinted upon the cloth.

As a non-scientist I am fascinated by the science involved in this latest test. I found it beautiful and very interesting. What was this test and how reliable was it? I hope those of you who are familiar with the scientific side of archaeology will forgive me going into a little detail about the carbon fourteen test itself which was employed in Oxford, in Arizona and in Zurich. An unstable and radio-active form of carbon, called carbon fourteen is present in the atmosphere naturally and all living matter absorbs this carbon fourteen from the atmosphere. Plants absorb carbon fourteen by photosynthesis and animals by eating the plants. There are very small quantities involved, there is only one carbon fourteen atom for every trillion ordinary carbon atoms, but even that trace, one atom in every trillion atoms of ordinary carbon can be measured. Once something is dead, like flax for example, it no longer has the capacity to take in carbon fourteen from the atmosphere and the content of this unstable and radioactive form of carbon

steadily diminishes. We know that the amount of carbon fourteen in a living thing decreases at a standard rate so that you can work out when a tree was cut down or when some flax was gathered.

Now that is the basic science involved. The first great beneficiary of this advance were the Dead Sea Scrolls. When they were discovered they became the centre of a great controversy. Many scholars believed that they were medieval forgeries, some put the date of the scrolls as recent as the 16th century. Confirming the dating of the scrolls to what we now believe to be somewhere around 20 BC has been extremely important for the study of Palestine and Judaism in the period just before the birth of Jesus Christ, for which we have remarkably little documentary evidence. It therefore has been a discovery of very great significance to biblical studies and archaeology generally. But as experience of carbon fourteen dating was extended, people began to notice some worrying discrepancies between the results you got by carbon dating and the results you got from the records of the Egyptian dynasties which provide us with the longest series of calendrically based dates of events and people in our civilisation. Comparisons between some of the dates arrived at by following Egyptian records and the dates arrived at by carbon fourteen methods showed some significant discrepancies. The view was formed that the production of this carbon fourteen in the atmosphere must have varied for some reason from time to time in history. Perhaps changes in the earth's magnetic field permitted less or more radiation to enter the earth's atmosphere - we are not entirely certain of the reasons. But for some reason or another production of carbon fourteen seems to have varied from time to time in history. So carbon fourteen dating sometimes required correction and this correction has been supplied in recent times, by a new science - dendrochronology, the science of establishing dates by using tree ring dating. The particularly significant tree involved here is the immensely long-lived bristle cone pine which lives in California, this tree has provided tree ring dates for the last 8,000 years. You can date a wood sample from this tree by carbon-fourteen and you can date it by using the tree rings, then you can compare the results and draw up a way of correcting some of the variations which are discernible in your carbon fourteen results.

The first great advance was the basic discovery about carbon fourteen, the second advance, the ability to check it against the results you get from tree rings, and then the third advance, which has happened really in our own decade has greatly reduced the amount of material which you need to destroy in order to take a carbon fourteen reading. Until the early eighties you took a sample of the material you wanted to date and burnt it and measured the radio-activity of the remaining carbon fourteen using a geiger counter. Now that required the destruction of quite a lot of material and very understandably the church authorities in Turin were unwilling to allow so much of the material of what could have been the very burial cloth of Jesus Christ to be tested in this way. But in the eighties a new technology was introduced which measured carbon fourteen in a very different way. It didn't count the radio-active emission but was able to count the atoms themselves by the use of a machine called an accelerator. Now many of you will know much more about accelerators than I do. Atoms are propelled at a high velocity and it is possible to count in one of these huge accelerators, the number of carbon fourteen atoms in a particular sample. This method has reduced the amount of material you need to use in order to take an accurate reading, and the laboratories in Oxford, in Arizona, and in Zurich which were used for this test and whose results were published in October, used this new method.

So now we have a date from this method, a date of 1260 to 1390. Which is what we might have expected if the fourteenth century records of the Holy Shroud of Turin had been taken really seriously. How did we get to a point, ten years ago when enthusiasm for and interest in the Holy Shroud was at its very height, when the argument, despite all that the fourteenth century documents had said about the Holy Shroud of Turin, appeared to have been won by the supporters of the Shroud's authenticity? This, it was proclaimed, was a first century shroud on which the likeness of a crucified man had become imprinted and it was probable that the man was Jesus Christ. Now the answer to that question, involves some fascinating light being shed upon the state of mind of parts of our contemporary society in the West and especially about the way in which the authority of scientific language and gadgetry is used to promote notions which do not have scientific origins. Now what do we know from the historical record?

First of all - Relics. Speaking personally, (you may have very different ideas which reflect your own religious tradition) relics which have often been subject to vulgar abuse and ridicule are still objects which stimulate devotion and I am greatly moved for example by a visit to a place like Whitchurch Canonicorum, in Dorset, a small village where one of the very few shrines to hold relics has survived in an ancient English church, the turmoil of the reformation. You have there the relics of St. Wite who was probably a young Anglo-Saxon girl slaughtered by the invading pagan Danes. And for some extraordinary reason which we don't fully understand, there in Whitchurch Canonicorum they have survived. Edward the Confessor survived at Westminster Abbey, not because he was a saint, but because he was a king. In all ages the cult of the relics has been held up to vulgar abuse and ridicule. Boccaccio had a sneering reference to a relic which he claimed was in circulation in his day - a feather dropped by Gabriel at the Annunciation. Then I remember reading a list of relics preserved at the Church in Wittenburg which Luther must have known and there was on that list a very dubious item said to be 'a yarn spun by the blessed Virgin Mary'. And so in all ages we have had vulgar abuse and ridicule heaped on relics. But relics of the saints are like having a tangible link with a friend at Court. It is like having an Ambassador standing there in the nearer presence of God, in the Court of heaven. Of having a channel of communication with that other part of the church which is beyond the grave which lives there in God's nearer presence. I see nothing contemptible or absurd about that. I see nothing contemptible or absurd about devotional aids, about using for example a shroud, like the Shroud of Turin in the services of Holy Week in order to concentrate peoples minds on the details of the Passion. Such shrouds were very common in the middle ages. Impressions of our Lords face were not uncommon. They were often called Vera Icons, true likenesses from which of course we get the woman's name - Verónica. There were shrouds other than the shroud of Turin, in fact there were more celebrated ones. There was the shroud for example of Cadouin, which was acquired by the Cistercian abbey of Cadouin in 1117. Our own king Richard Cour de Lion not noted for his pious excesses, venerated the shroud of Cadouin and made a special visit to see it. The shroud of Cadouin is old and work done between the wars show that it was woven as long ago as the tenth century. Fascinating speculations were aroused by the fact that its bands were actually embroidered with kufic letters, a kind of hieratic writing in Arabic. These Arabic writings contained praises of Allah, and they were woven into the tenth century shroud of Cadouin. Now we turn to the particular shroud which has caused so much fascination and interest over the last few years - the shroud of Turin. It is 14' 3" long, and it 3' 7" wide. It looks ivory because the linen is aged

and it has an ivory colour. You can see a shadow-like image, very faintly of the back and the front, of a powerfully built bearded man, who has been described by one of the great students of the shroud, the great sindonologist, Professor Carlron Coone, as being like the 'Sephardic Jew or the noble Arab type'. Unless you view it from a distance the image is very hard to distinguish and there are also blood stains in a rather different colour from the colour of the body itself. That colour is described by Ian Wilson who has studied the shroud closely, as clear, plain carmine. The cloth is woven in one piece except for a strip on the left hand side which is about 3½" wide.

So what about its history? What we do know for certain is that in 1353, a knight called Geoffrey de Charny had obtained the support of the French king - who was then King John the Good - to found a church to the south east of Paris, at Lirey. A band of canons were recruited to serve the church. This was the Shroud's first known historical home. Geoffrey was afterwards given a new and very prestigious office - the Banner Bearer to the French king, King John the Good. I am afraid the British got him at the battle of Poitiers in 1356 and he perished in that battle in the last stand defending his royal master and the banner. The year after - 1357, we have the first known showing of the shroud by that group of canons at Lirey. The bishop of the local see was Bishop Henri de Poitiers and he intervened after the exposition. Doubts were expressed about the genuineness of the shroud and the bishop suspended the showing of it. But in 1389, some decades later, the shroud came out again, and was again being shown to increasing numbers of pilgrims. At this point Henri's successor Pierre d'Arcis, Bishop of Troyes, protested again, and wrote to the Pope, (the Pope at this time was not in Rome, he was in Avignon) to ask him to stop these showings of the shroud. This document written by the Bishop in 1389, was translated by one of the great opponents of the authenticity of the shroud, the Jesuit, Herbert Thurston. Throughout this story it is indeed bizarre that the Shroud's most able and learned critics have been Jesuits and churchman, and its most pronounced and emphatic supporters have been born-again scientists. This is what Bishop Pierre d'Arcis said in 1389 writing to the Pope after the renewal of the expositions. "The case, Holy Father stands thus. Sometime since in this diocese of Troyes, the Dean of a certain collegiate church to wit that of Lirey, falsely and deceitfully being consumed with a passion of avarice, and not from any motive of devotion but only of gain, procured for his church a certain cloth cunningly painted upon, which by a clever slight of hand was depicted the two-fold image of one man that is to say the back and front, he falsely declaring and pretending that this was the actual shroud in which our Saviour Jesus Christ was enfolded in the tomb and upon which the whole likeness of the Saviour had remained thus impressed together with the wounds that he bore." Now the Bishop goes on complaining about the Canons of Lirey getting totally out of hand and he wants the Pope's support in putting them back into their place, but then he refers to his predecessor's experience, when the expositions had first started. He says the late Lord Henri of Poitiers of pious memory, then Bishop of Troyes, being aware of all this made investigations, "Eventually after diligent enquiry and examination Bishop Henri discovered the fraud and how the said cloth had been cunningly painted, the truth being attested by the artist, who had painted it to wit that it was a work of human skill and not miraculously wrought or bestowed." Pope Clement VII said that the canons could continue to show the shroud, which wasn't entirely surprising since Pope Clement VII was a relative of the Charny family, the owners of the shroud. The Pope said however that whenever the shroud was shown, the people should be told, that it was not the shroud

itself, the veritable shroud of Christ but only a representation of it to evoke a devotional response. Clement VII's sensible view, this is a devotional aid, the people must be told it is not the real thing itself, has been upheld throughout the centuries by two Jesuits in particular, the great polymath, Ulysse Chevalie, the French scholar, deeply learned in the sources of medieval history, and of course from our own country Herbert Thurston, the formidable Jesuit scholar who for so many years lived in Farm Street.

Now the later history of the shroud is quite simply that by the end of the 15th century it had passed into the keeping of the Royal House of Savoy away from the Charny family and until the death of the last king of Italy, which was in 1983, when he willed his interest in the shroud to the Pope, it remained in the possession and keeping in the Royal House of Savoy. One of the most obvious things about the shroud is that it has been damaged by fire, you can see these marks very clearly. We know there was a fire when it was in the keeping in the Royal House of Savoy. In 1532, the chapel where it was being exhibited in Chambery caught fire and the silver casket which contained the shroud began to melt and drops of molten silver dropped on it, you can still see those marks to this day. At the end of the 16th century, the shroud was actually moved with the capital of the Dukedom of Savoy, and that is when it came to rest in Turin. One of my own great heroes St Francis de Salles, that eminently sane writer on the spiritual life was devoted to this particular shroud and we know that in 1613 he himself held it up for the veneration of the faithful at an exposition that year.

The Congregation for Indulgences, that Roman body which decreed what kind of indulgence you got - what kind of remission of your pains in purgatory you got, for making a certain pilgrimage or doing a certain pious act, said this about visiting the Shroud of Turin in 1670, long before carbon dating or any thing like that. "When you visit the shroud in Turin you will be granted a plenary indulgence" and I am quoting now, "not for venerating the cloth as the true shroud of Christ but rather for meditating on the passion." That is what the Congregation of Indulgences said in 1670. Now the Shroud's story in the popular press had sometimes recently been represented as yet another conflict between science and religion, the umpteenth round in the fisticuffs which started with Galileo, headlines about the 'Church Found Out', 'Deep Embarrassment of Cardinal', all that sort of thing. Actually church authority always been very careful in its official statements about this Shroud, and the doubtiest opponents of the authenticity of this particular relic were Jesuits. Now this is something really worth taking on board when we contemplate some of the hysterical publicity that there has been recently on this subject. The modern story of the shroud begins really only at the end of the 19th century and the enthusiasm for it is the creation of new scientific processes which have brought to light some very extraordinary things about it which remain to this day enigmatic and that is why the Cardinal of Turin is promising further tests.

It is well known that in 1898, when the shroud was put on view once again to celebrate the fiftieth anniversary of the constitution, a photograph was taken of it by a photographer in Turin, called Secondo Pia. A better series of photographs was taken in 1931, and when you look at the negatives of the photographs that have been taken you see that the whole figure and particularly the face seems vastly more life like and vivid than it does when you just look at the shroud, in its natural state. When the camera reverses the tones on the shroud an image is disclosed which is very life like and very haunting indeed. The French poet Paul Claudell said "something so

frightening, but yet so beautiful lies in the shroud that a man can only escape it by worship". And so photography, beginning in 1898 has actually brought the image out of the shroud. When you look at the shroud in its natural state the figure shows a very pale image, like scorch marks on a light surface. On the negative as you would expect, the background is dark and the details like the blood and other things show very light white, but the negative of a portrait of someone doesn't usually look as life-like as the negative of the Shroud of Turin. On the negative the face stands out and when the photographer reverses the light values, we can see a very haunting image hidden in the cloth, an image which can only now be unlocked by the camera. Now of course there have been lots of theories as to why this phenomenon has occurred. Some people appeal to the 'example of medieval painting, like Cimabues frescoes in Assisi, where the flesh tints have turned black, but the image of the shroud doesn't look like a painting, it doesn't look as though it has just been painted on the cloth. For one thing the image seems to lie on the top of the fibres of the cloth and people have been unable to discern any traces of colour pigment caught in the crevices. It does not look as if it is a direct painting, there is no attempt to paint an outline or anything which might have guided a medieval forger. Both opponents and supporters have been unable to convince themselves of the authenticity of the shroud, that there is a painting involved here.

Could an image have been made by somebody who had actually procured a corpse, and coated it with some suitable substance to produce an image when a cloth was laid on it? Well if you wrap something like a cloth round a three dimensional corpse when you unfold the cloth again, you obviously get a very distorted image. So once again supporters of the cloth and opponents of its authenticity have dismissed this as a possible way in which the cloth was made. So it was the evidence of the camera which proved to be very difficult to understand and interpret, but was very haunting and arresting and then of course there was some medical evidence.

The camera allowed doctors all over the world to study in great detail, the wounds and the blood flow from the figure imprinted on the shroud. One of the pathologists deeply involved in the study of the shroud, Pierre Barbet was impressed by the record of the blood flows. Each of the different wounds he said, acted in a characteristic fashion, each bled in a manner which corresponded to the nature of the injury. The blood followed the flow of gravity in every instance. He feels that accuracy with which all this is portrayed would be beyond any forger now, let alone in the middle ages. Doctors have been constantly impressed by how consistent the wounds are with the imposition of a crown of thorns on the head of this image. They have also been impressed by the numerous impressions on the back of the figure, little dumbbell shaped markings, perhaps 90 to 120 of them which are consistent with the victim having been whipped by a Roman flagrum, a kind of whip of which we have examples. An actual example of a Roman flagrum has been discovered in Herculanium, the second of those cities buried by the eruption of Vesuvius. The figure is obviously that of a victim of crucifixion, and a victim of crucifixion, nailed not as was so frequently depicted, in the palms of the hands, but nailed through the wrist. Now this creates a bit of a difficulty because on the cross, none of Christ's bone were supposed to have been broken. This is a very bony part of the hand. How can you actually get a nail through the wrist without breaking any bones? Pierre Barbet who was chief surgeon of St. Josephs hospital in Paris, conducted some fascinating experiments before the war on freshly amputated limbs, trying to find out whether the way in which the shroud showed Jesus as

having been crucified, was plausible. He did some experiments on these freshly amputated limbs and found a place in the wrist where a nail could penetrate without breaking any bones at all, the so called space of Destot. When he drove a nail through the wrist he was also astonished to discover that one of the immediate results was the thumb immediately contracted. The thumb immediately contracted into the palm, because the nail had touched the median nerve. One of the most strange things about the image is that no thumbs are visible. Barbet said "Could a forger have imagined this?" Now I find this medical evidence particularly troubling and haunting. He went on in fact to write a devotional best seller on the sufferings of Jesus during the time of the crucifixion based on the wounds that he had observed on the figure imprinted on the shroud of Turin. All the details of these experiments you can find in a book by John Walsh's, "The Shroud". I think there is another story just beginning. After Barbet's researches he showed his results to an agnostic friend, also a scientist who said, "But, old chap, then it is true, Jesus Christ did really rise again." His attitude has been echoed again and again by people confronted by this astonishing evidence.

After the war a further fillip to the investigation was given by the foundation in the United States of the Holy Shroud Guild in 1951. It was from that guild that the shroud of Turin research project which is known as STURP for short, developed. This Shroud of Turin Research Project was able in 1973 to observe certain other experiments being done on the shroud because a commission was set up by the then Cardinal Archbishop of Turin to review the evidence and to look more deeply into the authenticity of the shroud. Some further interesting results emerged from those 1973 tests. Notably one of them, carried out by Max Frei, who was a lecturer in criminology at Zurich, into the traces of pollen found in the shroud. This pollen was collected some people say in a rather crude fashion, because he just laid sticky tape on the shroud and then peeled it away with some of his material for study on it. He claimed to have discovered by collecting these pollen samples from the shroud, traces of six desert plants, native to Palestine, and some pollen traces of plants which indicated that the shroud may once upon a time have been in Anatolia, modern day Turkey. Now this of course provided the fillip for equipping the shroud with something that it obviously lacked in view of those fourteenth century documents with which I started, and that is a pre-history, a pre-fourteenth century history. The pollen samples did provide a good deal of encouragement for plotting the travels of this shroud through Edessa, on to Constantinople, back with the Templars until it finally arrived in France, was approved for the first time as far as we know in 1357. Now I am not competent to estimate a test on pollen analysis. People who know much more than I do say it is extremely difficult to judge whether you are dealing with an Italian species, or an Palestinian species of very similar plants, and also of course the shroud itself had been constantly exposed and exhibited and people have wanted to touch it with objects and it may well be that it has attracted a great deal of extraneous debris which do not belong to its original form. But be that as it may, the pollen experiments in '73 gave another boost to the growing excitement.

At the same time however, and less widely publicised, analyses of the textile were undertaken. As can be very easily seen the fabric was woven in herring-bone style, a herring-bone twill, which has been common enough, throughout history, but was not common in Palestine or Egypt during the time of Jesus. The weave of linen in Palestine and Egypt in those days was rather different. It was so called 'tabby' weave which is a plain way of weaving. But that evidence wasn't perhaps given so much publicity and attention.

By 1977 there was a great conference of this American research body in New Mexico, and the correspondent of the Los Angeles time said, in looking at the participants, "Among the forty participants were scientists from the jet propulsion laboratory", that was an institution of the NASA agency, "scientists from the Air Force academy, a scientist whose company proved that the so called Vinland map was a fake, an eminent British New Testament scholar," that was John Robinson, "Catholic priests from New York and the Vatican, and four long haired members of the communal Christs brotherhood." American publicity and high-tech were able to excite still further interest and enthusiasm all over the world for this truly astonishing object and tests were done in 1978 after which, one of the leading figures in the shroud's research project, Thomas de Mueller, was reported as saying, "mounting circumstantial evidence suggests that the three dimensional image on the cloth was projected on the surface perhaps by a burst of some kind of radiation, emanating from all parts of the body in a two thousandth of a second flash. Everyone of the scientists I talked to believed that the cloth is authentic, and some say this is a love letter, a tool left behind for the analytical mind." Now at the same time there was a good deal of personal acrimony and politicking between scientists who were interested in the tests. This acrimony is very obvious in David Sox's book, called "The Shroud Unmasked". It is rather excitable. It compares almost all the principal actors in this great drama, to some Hollywood or political characters, but the tests were carried out with a battery of truly astonishing machines. David Sox records on page 67 of his book that the tests involved between 100,000 and 150,000 scientific man- hours. Their efforts are described as an unparalleled adventure through time and micro-space using extraordinary gadgets, visible, ultra-violet photography, computer image enhancement, topographic imaging, multi-spectral analysis, mathematical image analysis, low energy x-radiography, x-ray fluorescence, reflectant spectroscopy, ultra-violet thermography and micro-density. I began to wonder whether I am reading some sort of hermetic text from the gnostics of Alexandria. It is an astonishing catalogue of the gadgets and the methods that were thrown over a very long period of time at the shroud, and enthusiasm, despite the fact that these tests were unable to come to any really concrete conclusion mounted to an all time high. We had a film, called the "Silent Witness", a deeply impressive film. We have the cover of the Sunday Times Magazine section, on Easter Day 1978, devoted to the Shroud of Turin. It was a sell out, and the text was chiefly devoted to extolling the virtues of the shroud, it was a most extraordinary moment. There is a school project on the science behind the shroud, which I have seen widely distributed in primary schools and in the early forms of secondary schools as a part of their religious education syllabus. There was an extraordinary hullaballu.

Is sounds a little hollow now that it seems that the Bishop of Troyes was right. Should we have left the whole thing as a mystery? People would seem to be rather regretful that this result has finally come out. I really can't agree with that. Mystery is very different from the mystification which imposes upon the credulity of people over impressed with this sort of formidable scientific paraphernalia. The only mystery that always unnecessarily eludes our minds and our understanding, is why there is life rather than nothing. Why there is something in this universe rather than nothing. What is the meaning of the whole process of life in which we are involved and which has created our minds? It seems to me that there are wonders enough in this universe available for our contemplation without manufacturing any counterfeit marvels. The whole thing is wonderful enough. The 90 year story of the shroud since 1898 should teach us to beware of the

hypnotic effects of the new language of mystification. The language of science, rather than science itself, which has at last confirmed what the voices of authority have been saying since the fourteenth century can be used and manipulated to impose upon lay people like myself. This is an object lesson. It teaches us to be more critical when we hear this sort of vocabulary which actually puts our critical facilities to sleep. The language of religion no longer conveys so much automatic authority for our contemporaries. This has been a fascinating example of how the new language of authority has been used to cover up something which is mystification rather than mystery. And the last point. I am glad that the Cardinal has said that the shroud should not be left alone now, I am glad that he has said that there will be further tests, to discover how the image came to be imprinted upon it. Because deeply impressed by the medical evidence as one contemplates the shroud more and more, there is something frightening in it. There is something haunting. The puzzle of how the image was created still remains. How it was created with so many properties which have impressed and convinced medical men in the last 90 years. That enigma is still there. "Could a medieval forger really have done it?" said Pierre Barbet. So, impressed by the medical evidence recovered particularly by Barbet in his experiments on his freshly amputated limbs I begin to wonder if we don't have behind those contracted thumbs, and behind that astonishingly authentic image, some individual human being used in some way in the production of the shroud. I hope that science will be able to help us still further to establish how it was created. I would like to know how that image was produced, because now I have some worries, which I want put at rest. What is your view?

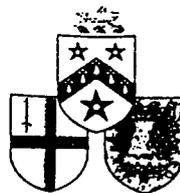
Thank you very much.

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