

INTERVIEW WITH Dr MICHAEL TITE BY ORAZIO PETROSILLO  
(Rome Journalist) and Professor EMANUELA MARINELLI,(Rome)  
8 September 1989, during the Paris Symposium

**PETROSILLO:** So now you have a promotion?

**TITE:** I'm getting less money in this new job. I've been at the British Museum for fourteen years so a change is a change.

**PETROSILLO:** Why were the recent tests not undertaken with inter disciplinaryity. What is your opinion?

**TITE:** I think it is because we saw the radiocarbon dating as a completely separate operation. One took one's samples and then when one had finished with the Shroud as an object one went back to one's laboratories and made one's measurements. It was just a separate operation. It would have been entirely possible for the other scientists to have been doing their work once we had taken the samples but we thought there would be so much press and media coverage if it had been done under those circumstances that it would have just made life more difficult than it was already. I think that was the only reason.

**P:** It was easier for you to work just with the carbon experts?

**T:** Yes, without many people. We needed the Shroud only to take the samples. Once we had taken them the Shroud could go away as we had finished with it. The other groups needed to work with the Shroud for extended periods and we just felt that if we did it altogether then there would be so many people milling around the Shroud, there would be all sorts of doubts about the samples, where they'd come from. If everyone had been there, there would have been hundreds of people and we just thought it would be so much easier if we got our samples first. It could have been the next week or anything but from our point of view we just wanted to remain separate physically just because of the crush.

**P:** So it was just keeping privacy?

**T:** Yes, privacy and ease of taking the samples. There were 20 or 30 people as it was. If you'd had all the other scientists the room would have been packed with people.

**P:** Somebody raised this strange matter: That the laboratories were in close contact with each other during the period.

**T:** There was no point in contact. There was nothing to compare. They'd do the work alone and then send it off to me. My concern was have you finished yet but that was all. I'm sure nobody communicated anything between the laboratories.

**MARINELLI:** It is strange that they decided not to do blind tests. How could the three laboratories decide to do their work in the same manner, the same way,



## TITE INTERVIEW (Contd)

without an agreement.

**TITE:** The decision not to blind test was decided effectively by the time we went to Turin to collect the samples or more or less at Turin when we collected the samples. We had decided it could not be a blind test because they'd been given whole pieces of the Shroud which they could immediately identify and therefore it could not be a blind test. And that was all decided before, or at least at, Turin. I suppose finally at Turin when we decided we were going to give them a whole piece of cloth which they could immediately identify because of the unusual weave. So the decision that it was not blind was taken finally at Turin but we did not change the details of the protocol so although the test was not blind the Cardinal and I and, in fact, also Professor Gonella, went into a separate room and put the samples in steel containers as if it was blind but this is just an anomaly of the protocol which had not kept pace with our changing ideas as to how it should be done. The thing evolved. We had a protocol which evolved as we went through it. We collected our control samples and did other things and so it evolved. One does not see a protocol as an absolute. It is a guideline and it evolved. It was only at Turin we decided it was not blind but there were some oddities that stayed in. They are just anomalous; there is nothing sinister about them.

**P:** Professor Gonella says that the laboratories did not give to the church representatives the same hospitality that they gave to them. So you were in Turin but nobody from the church was allowed to follow the examination but somebody else like Sox or Gove participated in the research in the labs.

**T:** I do not know whether Prof Gonella specifically asked to be present when the measurements were made. You must ask him this. My feeling is that if he had asked I think the labs would have said yes. Perhaps he did ask and he was refused. I don't know. I can't see why if he asked they wouldn't say by all means. There is no doubt the labs said they wanted to be in Turin. They certainly said that they wanted to see the samples being taken. I think partly it was quite an historic event to do radiocarbon dating of the Shroud and therefore if you have done radiocarbon dating on the Shroud you would like to feel you had been there and seen the Shroud and actually taken the sample more or less directly from it. If the sample had been given as shreds it was in everyone's interests that as many people as possible systematically watched and saw the samples being taken, going into the containers and being given to the labs. You see it was in everyone's interests. It was not the labs not trusting the Cardinal but somebody afterwards that said it could have been swapped. And one is protecting everyone by having people involved at this sort of level. Not the labs not trusting the Cardinal but the press or somebody outside could say the samples were swapped.



## TITE INTERVIEW (Contd)

P: What about the fourth sample ?

T: I was asked to provide two control samples, one from the period of Christ and one from the Middle Ages. The sample from the period of Christ was very easy to find. There are many pieces of linen from that period available.

P: This was from Cleopatra's tomb?

T: I'm not certain. I'm not an Egyptologist, but there are many pieces of linen from Egypt of that period. They are very easy to obtain and I obtained a piece from the British Museum. That was the first control, no problem. The second control, from the Middle Ages, was very much more difficult. It is difficult to find a piece of linen which is reasonably well dated historically from the Middle Ages which somebody is prepared to let you cut off a piece that size. There was none in the British Museum, there was none in the Victoria and Albert Museum, there was none in the Cluny Museum in Paris, and so I was beginning to get slightly panicky because I had to provide two samples so I mentioned to Professor Gonella that I was having some difficulties and he mentioned it to M. Evin. I mentioned it to Ian Wilson and to someone in England who eventually provided the one sample which I brought. I wanted one sample but in order to get it I asked four people so there's this story that I was looking for four samples but I only wanted one. Now, I produced the sample in the end from some cloth in Nubia from an Islamic Christian grave which was dated to be 11th or 12th century which was a bit earlier than we wanted and it was not very precisely dated in reality and we were unable to get, even then, a big enough piece to do a conventional radiocarbon date. So I had my doubts but I thought it was a valid sample. I came to Turin with two samples. I knew that Evin and Vial were trying to get a sample from a place in France but I had not heard whether they had got it. When we arrived in Turin I had my two samples which were whole pieces of cloth and I found that Evin and Vial had also been successful. I think that was the first time I knew they'd been successful. We had together approached the Cluny Museum who'd said no and I knew that they were approaching another source but I don't think that until I got there that I knew they'd actually got a sample. So they had what was the fourth sample, or the third control sample, but it was in the form of threads so the labs agreed to date all four samples. Two of them were whole pieces of cloth so they were treated in the same way as the Shroud sample and were part of the blind test protocol for which we'd got these blasted cylinders which were numbered and although the test was no longer blind we still went ahead and put them in. So the two controls that I had brought went into the cylinders and we had this fourth sample which was given to the laboratories in an envelope at the same time. They were packaged up with the Cardinal and Professor Gonella there and everyone knowing about it.



## TITE INTERVIEW (Contd)

P: The Cardinal was there when it was put into the envelope?

T: Certainly the Cardinal was there. We had a ceremony with the three containers in which he said, "There we are, there we are, there we are," but the other samples were in the envelope and I gave them to the recipients but it was at the same time. It was packaged up with both the Cardinal and Gonella there.

P: Riggi doesn't mention it, neither does Sox.

T: But Professor Testore mentioned it yesterday in his talk and he in fact was the person who weighed up the threads.

MARINELLI: It was not in the box with the tubes?

T: No, because we only had three tubes

M: The first sample was not in a tube, nor was it in the box with the tubes ?

T: No. Because the box was designed to take three tubes.

M: There is no mention of the fourth sample in your letter to the Cardinal.

T: No, because we were expecting two samples, one from the period of Christ and one medieval. It was the medieval one we had difficulty with so we ended up with two. At one stage I was worried whether we'd have any but we had two and so we gave the two.

P: You knew on 21st April that Evin was there and he participated in the ceremony?

T: No, he was not present. He was in Turin at the time. I think he saw it sometime during the afternoon. But Vial was there because he was one of the textile experts who was guaranteeing or examining: someone who could say afterwards that it came from the main piece of the Shroud. And one gave that fourth sample for a number of reasons. It would have been extremely embarrassing if the French had gone to this great trouble to obtain this thread and it was never dated. That was one reason and secondly because the labs were quite happy to date another sample and thirdly it was a much more precisely dated control than the one that I had brought. The one I'd brought was almost certainly 11th or 12th century whereas this one was precisely dated to about 1300 and so it was a very good control to have. So we gave it to them. But its caused a lot of trouble; its given people a lot of red herrings they can follow.

P: But what is embarrassing is that this fourth control is exactly the right date.

T: We were trying to get a control which was close to the other possible date for the Shroud, that is, when it appeared. That was an ideal control but it is also where the dates are closely grouped together whereas the Shroud has a wider grouping between the labs.

P: I'm not an expert of course but I think, in my mind, that if you put two twins into the test they will not give the same age as the fourth sample and the Shroud.

T: The alternative would have been that if the Shroud had come out at the period



## TITE INTERVIEW (Contd)

of Christ it would have matched closely the other control and somebody would have said," How odd, its just like the control from Cleopatra's linen." We had great difficulty finding a medieval sample with the added restriction of a herringbone weave and M. Vial yesterday gave a survey of various Shroud and linen samples and he said that it was very rare to find herringbone twill in linen before the 16th Century, he found samples in silk.

M: In Sox's book he says one of the control samples was similar herringbone twill.

T: No, it was not. As Vial said, the oddity is that in the Cope from Florence, the weave of the linen is normal but the weave of the gold thread embroidery is, in fact, herringbone and on the linen apparently there is an impression from the gold that shows up as herringbone. Some people therefore thought that the cloth itself was herringbone. This is still irrelevant because the sample the labs were given were individual threads, so this just adds to the red herrings.

P: Why did the individual labs not publish photographs with weights and more details. The article in *Nature* has no photos.

T: The labs photographed their own samples and the archive exists but *Nature* was not prepared to take anything longer than they did. It was quite a battle getting all the data in that we did get in which was certainly the data for each of the individual measurements. It contains far more detail than any other published radiocarbon date.

P: Why did you choose *Nature* and not *Radiocarbon* or other publications ?

T: Because *Nature* is put out more rapidly. It comes out once a week and is accepted for immediate results.

M: But we still waited until February.

T: I wrote the article. I was the person who put it together and circulated it to the labs and they added their bit. In our lab we did the statistical analysis.

M: In Sox's book he says that in Zurich the weight of the Shroud sample was less than it was in Turin.

T: I don't think the labs knew the precise weight of the samples. It is not really relevant.

M: The Shroud was polluted?

P: The Shroud sample was not as polluted as expected?

T: These are all relative terms. Clearly it was polluted as every sample is and the labs went through the normal pre-treatment processes but more carefully than normal. They also tried a weak pre-treatment and a strong pre-treatment without any very great difference. Has your newspaper not reported the French gentleman who accuses me of swapping the samples?

P: Yes, but I quoted him. We have no axe to grind ourselves.



## TITE INTERVIEW (Contd)

M: Was a report written in Turin on 21st April ?

T: I hope so but that was the responsibility of Gonella and Riggi. They were providing the documentary. We have the full video.

P: If there is no doubt that the Shroud is medieval what do you think about the research reported at this symposium, for instance, the many arguments from the point of view of history, iconography, etc. How do you personally explain the Shroud being from the 14th century?

T: I think the other scientific data is not inconsistent with a 14th century date. I was listening to a paper saying the pollen comes from Jerusalem. Well, the Shroud could have come from Jerusalem in the Middle Ages. I'm not going to criticise historians and art iconographers but clearly its less hard data than scientific data. You can put a lot of interpretations on iconography but with other scientific data like the presence of bloodstains and the discoloration it is as difficult to explain how the image got there if it is the date of Christ as it is of the Middle Ages. The blood could have got there at either time. I'm not competent to judge the iconography. We still have to explain how the image got there and whatever way it is it could have been just as easily at either period. I think almost certainly that a body or some 3-dimensional object must have been involved to produce an image like that but it could have happened in the Middle Ages just as easily as 2,000 years ago.

P: At the moment there is no argument to certify that the Shroud was made by some artist?

T: No, we do not know. I personally think a body was involved in the Middle Ages. No iconography is clear-cut. There were crucifixions in the 14th century in the Crusades. I found the rest of the Symposium very interesting. The Shroud is a unique object whether it is medieval or 2,000 years old and it needs to be conserved. It is still important to find out how the image was formed but I have no doubts myself that it is medieval.

