

## EDITORIAL

A deep apology to all members for the late publication of this Newsletter. Throughout September the official results of the carbon dating were expected almost any day, and it was therefore thought better to wait until these were released. Despite the months of rumour, we as a Society had no reliable information of the outcome of the dating, and received authoritative confirmation of "mediaeval" merely twelve hours before the carbon dating laboratories' specific dates were announced to the world. Those results are inevitably disquieting, but as Ian Wilson makes clear in this issue's main article, the carbon dating on its own simply cannot represent the "proof" of the Shroud's fraudulence that the laboratories and media have claimed for it.

### THE CARBON DATING RESULTS: IS THIS NOW THE END?

By Ian Wilson

As the world now knows, the Turin Shroud has been 'proved' a fake. On Thursday 13 October (coincidentally, the 681st anniversary of the suppression of the Templars), it was officially announced that the radiocarbon laboratories of Oxford, Arizona and Zurich had dated samples of the Shroud's linen "with 95% certainty" to somewhere between the years 1260 and 1390. At a British Museum press conference Dr. Michael Tite, together with fellow-physicists Professor Edward Hall and Dr. Robert Hedges of the Oxford laboratory, declared that the odds were now "astronomical" against the Shroud genuinely dating from around the time of Christ. The three laboratories were said to have produced results in close accord with each other not only in respect of the Shroud, but also for their "blind" dating of the two control samples supplied by the British Museum, These were a piece of Egyptian mummy cloth already carbon dated to the first century AD, and a textile from Qasr Ibrim in Lower Nubia known from its context to have been woven in about the eleventh century AD. According to Hall, no-one of any scientific worth could now believe otherwise than that the Shroud is a fake. Anyone who thought differently might as well join the Flat Earthers. Even Cardinal Ballestrero of Turin' swept along with the apparent scientific conclusiveness of it all, acknowledged: "I see no reason for the Church to put these results in doubt".

Now even for anyone like myself, long used to all the scientific and historical arguments for and against the Shroud's authenticity, the laboratories' datings look most uncomfortably on target for the forgery hypothesis.

As has always been recognised, the Shroud's origins can only be traced back with certainty to the mid fourteenth century. It is a matter of historical record that at that very time a bishop of Troyes declared the Shroud "cunningly painted". Even if one tries to argue that some form of contamination may have interfered with the carbon dating reading, it seems more than coincidence that three separate laboratories, ostensibly working independently of each other, and with appropriate controls against instrument error, should have hit on the very century when, if the Shroud is a forgery, it is undoubtedly most likely to have been created.

Accordingly I freely admit that in the immediate wake of the release of the official results I felt more than a little rocked. The laboratories' credentials look impeccable, and with the British Museum Research Laboratory acting as guarantor, everything has seemed to suggest

that the whole test was conducted with the utmost scientific rigour - even despite the curious succession of so-called "leaks" of the dating result.

But if there was one feature of the British Museum press conference that particularly astonished, and frankly annoyed me, it was Professor Hall's flat assertion, on the basis merely of the averaged "1260-1390 AD" dates quoted (scientific publication of details will follow in another few months), that the carbon dates have overwhelmingly proved the Shroud's fraudulence. Effectively we are supposed to believe that on the basis of one single branch of science, nuclear physics (and all involved with the carbon dating, including Gonella and Tite, were physicists), every other scientific and historical contribution to the subject must now be tossed aside as totally worthless. As Hall admitted, it did not matter to him that there remained no clear explanation for how some hypothetical forger created the Shroud's image. The laboratories' instruments had spoken, and that was it.

Now although a mere arts graduate, I have always understood that to be truly scientific, any hypothesis needs to be checked from at least two different directions. For instance we do not expect the captain of an Atlantic-crossing jumbo jet, spotting that his fuel gauges suddenly read empty, immediately to ditch his aircraft in the sea without a few further checks. In the case of the Shroud it may be argued that just such further checks were provided by the "blind" control samples supplied by the British Museum. The fact that the laboratories agreed on the datings of these latter as well as on the Shroud samples has seemed to the media effectively the final proof positive that the Shroud really does date from the fourteenth century. To plead anything else is, as BBC Science Correspondent James Wilkinson put it to me, "clutching at straws".

But here is where a few facts, some of which have only become known to me since Black Thursday, need to be carefully aired. The first, a flaw in the very set-up of the carbon dating that was widely publicised back in January, is the fact that the three chosen laboratories all use exactly the same accelerator mass spectrometry (AMS) method of carbon dating, a method only introduced in the last few years, requiring a very high capital outlay, still jockeying for full acceptance, and still comparatively little tried on textiles. Few realise that instead of being totally dispassionate scientific institutions, the AMS laboratories are involved in an all-out war with their competitors, laboratories such as Harwell and Brookhaven which use the more conventional, but also more tried and tested proportional counter technique. In this war the Shroud is not a dubious artefact, work on which is almost beneath the laboratories' dignity, but rather a 'plum' project which all have been eager to be involved in because of the flag-waving opportunities offered for their competing techniques.

Now it is inevitable that if all three laboratories chosen to work on the Shroud use exactly the same method, and are given samples from exactly the same area of the cloth, the results are rather more likely to agree with each other than if different techniques, and samples taken from differing areas, had been involved. This is even if, as we are expected to believe, the chosen laboratories' scientists, all well used to telephoning each other on a day-to-day basis, really did resist every temptation to confer about the Shroud results throughout the six suspiciously leaky months in which these were awaited. Although they signed a formal agreement to this effect before being handed their samples, the fact that some prior disclosures took place, even outside those immediately involved, now seems undeniable [See the review of David Sox's new book later in this *Newsletter*].

Ideally, of course, the laboratories, each given a coded set of samples, one Shroud, two non-Shroud, should have had no way of knowing which was which, and this would have prevented anyone bar the code-holders, Dr. Tite and Cardinal Ballestrero, knowing the result in advance. But this became impossible, first when the laboratory scientists requested and were granted a viewing of the Shroud at first hand; and second, when Dr. Tite in his search for suitable controls, found he was unable to get anything sufficiently similar to the Shroud fabric to be indistinguishable from it. This deficiency to the set-up was in the circumstances accepted by myself and others as unavoidable, although it inevitably led to, and gave credence to, the highly publicised succession of leaks.

But here is where all the more reliance has needed to be placed on the "blind" controls as supplied by Dr. Tite of the British Museum being truly blind, and it is in respect of these that a hitherto unsignalled (and to me, previously unknown) fact needs now to be aired for the first time. This is the wording of the certificate as handed over, with the samples, to each laboratory's head by the British Museum's Dr. Tite and Turin's Cardinal Ballestrero on April 21 of this year:

The containers labeled ... 1, ... 2 and ... 3 to be delivered to representatives of [named laboratory] contain one sample of cloth taken in our presence from the Shroud of Turin at 9.45 am., 21 April 1988, and two control samples from one or both of the following cloths supplied through the British Museum: *first century cloth; eleventh century* [cloth]. The identity of the samples put in the individual containers has been recorded in a special notebook that will be kept confidential until the measurements have been made.

[signed] Anastasio Ballestrero,  
Michael Tite

I owe this information to page 136 of David Sox's book, Sox having seen the certificate that accompanied Wölfli's samples, and the almost staggering fact evident from this is that the laboratories not only knew which sample was the Shroud, but they also quite needlessly *knew in advance the exact dates of the other two samples*.

Furthermore, since the two controls were even of different weave one from the other, one being typical plain weave mummy cloth, scarcely a whit of deduction was needed to distinguish which was which, or whether one or both varieties of control had been supplied.

Why Dr. Tite should so gratuitously have given the laboratories this information is quite beyond me, but the effect cannot be other than to have totally negated any blindness to the "blind test procedure" that Dr. Tite specified for the Shroud in his letter to *Nature* of 7 April (see *Newsletter* no. 19). Effectively the whole experiment, which we are expected to believe has provided proof positive of the Shroud's fraudulence, was about as scientifically controlled as Dr. Magnus Pyke's arms.

In making this disclosure, which I do somewhat reluctantly, it is not my purpose to pour scorn on the laboratories or on Dr. Michael Tite, both of whom I continue to respect. I am not suggesting that the laboratories obtained anything other than the fourteenth century date they claim, and am perfectly prepared to accept that ultimately this *could* prove to be the true date. The Shroud would be little less extraordinary if it was the work of a fourteenth century artist, and none of us should be shy of facing this if the facts became inescapable.

What I insist, however, is that the facts are by no means yet inescapable. Up until now we have had some serious scientific and historical evidence, put forward, not by cranks, but by well respected individuals in responsible academic posts, suggestive that the Shroud (a) wrapped someone genuinely crucified in the manner recorded of Jesus, and (b) is historically traceable, not least from the evidence of Christ portraits, well before the fourteenth century. In the proper spirit of scientific openness, none of this has been claimed as proof, nor would it have been even if a first century date had been arrived at.

Now we have one single test, palpably flawed in the ways above mentioned, which some equally well-respected scientists tell us has produced a fourteenth century date. Clearly this finding represents a serious dent to the case for the Shroud's authenticity, it inevitably suggests the hand of an artist, and it demands fresh investigations of the Shroud's image to determine once-and-for-all whether Dr. Walter McCrone's iron oxide theory is correct (even Professor Hall has expressed his doubts about this), or whether the image has been formed along the lines suggested by Drs. Heller and Adler.

But what I cannot emphasise strongly enough is that the carbon dating test does not, as yet, justify anyone, least of all responsible laboratory scientists' claiming the Shroud's true date has been incontrovertibly proved to be the fourteenth century. Of course, with £2.4 million pounds of public money invested in the Oxford facility alone, it inevitably suits Professor Hall and his colleagues to represent carbon dating as having the precision of a Swiss watch. But as already made clear in *Newsletter* no. 14, carbon dates can be, and sometimes are widely more at sea with each other than the 95% confidence level claimed in respect of the Shroud. We have already noted how the dates arrived at by Harwell, Oxford, and archaeologists for the British Museum's Lindow Man differ by up to eight centuries. Carbon datings of the Thera or Santorini volcanic eruption (thought to have happened around 1500 BC) vary between 2400 BC and 1100 BC. David Sox in his new, book has even disclosed that Professor Wölfli of the Zurich laboratory, when trying out a 50 year old table cloth (his mother-in-law's), carbon dated this to 350 years old. Yet this latter discrepancy has been brushed aside as probably due to some interference from the detergents his mother-in-law had used when washing the cloth.

Ways in which the carbon dating *could* be wrong are suggested in the two contributions to this *Newsletter* that follow. Meanwhile I contend that is both inadequate and unscientific for Professor Hall to dismiss the Shroud's origins with the bald statement: "Someone just got a bit of linen, faked it up, and flogged it." Even if the Shroud really is ultimately found to be of the fourteenth century, it must rank, in American writer John Walsh's memorable words, as "one of the most ingenious, most unbelievably clever, products of the human mind and hand on record." And until someone produces totally irrefutable evidence for any such artistic hand, the continuing possibility of authenticity should at least be conceded. That does not seem too much to ask.