

LETTERS TO THE EDITOR

From **Professor Harry Gove**, pioneer of the Accelerator Mass Spectrometry (AMS) radiocarbon dating method used to date the Shroud

I am afraid that Dan Scavone [Newsletter no. 39, p.4] may have read too much into comments I made about the findings of Dr. Garza-Valdes. I would be very much obliged if you would print the attached statement in the next issue of the BSTS Newsletter. It may be that the 'bioplastic' coating will change the shroud date somewhat. My bet is that it is unlikely to do so by more than a 100 years or so - but time will tell ...

Professor Gove's statement follows:

CURRENT STATUS OF THE ACCELERATOR MASS SPECTROMETRY (AMS) RADIOCARBON DATING OF THE TURIN SHROUD

The carbon date reported in 1988 for the Turin Shroud by three AMS laboratories (Arizona, Oxford and Zurich) was that the flax of its linen was harvested in the early 14th century. This date is critically dependent on the assumption that the conventional cleaning methods, recommended by the British Museum and employed, with some variations, by all three laboratories, rid the Shroud samples of all carbonaceous contaminants - in short that what was carbon dated was linen from the original shroud and nothing else.

As can readily be calculated, to change the radiocarbon age of the Shroud from the published date of 1325 AD to the first century, 74% of the Shroud sample supplied to the three laboratories would have to be modern carbon contamination, and only 26% original Shroud material.

Visual inspection of the samples indicated that such a massive amount of modern carbonaceous contamination was extremely unlikely to be present either before or after the cleaning methods all three AMS laboratories employed.

However, as the last seven years have shown, it does not take much to raise the hopes of those who sincerely believe the Shroud is Christ's burial cloth that somehow the carbon date obtained by the three laboratories is flawed. Such hopes are remarkably independent of the degree of improbability of the cause. One of the more preposterous theories is that, at the time Christ's body is supposed by Christians to have been resurrected, a burst of neutrons was emitted that increased the radiocarbon content of the burial shroud making it appear some 1300 years younger when carbon dated. Another is that the fire the Shroud underwent in 1532 AD added sufficient modern carbon, in a fashion that was impervious to the cleaning methods employed, that again made the cloth, when carbon dated, appear to be thirteen centuries younger than it really is.

Most proponents of such ideas have little or no scientific training but, in any case, scientific rigor is not a commodity in which they take much stock. The remarkable coincidence that the carbon date reported by the three laboratories concurs closely with the Shroud's known historic date of 1353 AD is actually taken by a small coterie of "believers" as proof that the three laboratories were guilty of collusion to publish a fraud rather than, more plausibly, to lend credibility to the

value obtained. As one who has had a long association with the scientists at the three laboratories I can state categorically that any suggestion of unscientific behaviour on any of their parts is completely unwarranted. However, is there any new evidence that there is some modern carbonaceous contaminant that was not removed by the cleaning methods used by the three laboratories and, as a result, the Shroud might be older than the 1988 results indicated?

On September 2nd and 3rd, 1994 an informal roundtable titled "Microbiological Analysis of the Surface Structure of the Shroud of Turin" was held at the University of Texas' Health Science Centre at San Antonio (UTHSCSA) on the first day and at St. Mary's University on the second. The round table was jointly organized by Dr. Stephen Mattingly of the Department of Microbiology of UTHSCSA and Dr. L.A. Garza-Valdes, a pediatrician from San Antonio, who also has an association with Dr. Mattingly's department. From studies Dr. Garza-Valdes had been carrying out on some threads from the Turin Shroud he had concluded that they were coated with some bacteria-induced material he called a bioplastic coating. He had furthermore shown that the standard procedures conventionally employed to clean cloth prior to carbon dating may not have removed this modern carbonaceous contaminant - at least not completely.

Those of us who attended this round table were convinced of the general validity of Garza-Valdes' findings - there was some sort of 'halo' or bioplastic coating around some of the threads. I have been wrongly quoted in the January 1995 issue of the British Society for the Turin Shroud *Newsletter* as saying my visual inspection through a microscope of some of Garza-Valdes' Shroud threads indicated that as much as 60% was this bioplastic coating. In any case, it has not been determined what fraction of this coating is carbon and how much of its carbon is carbon-14. It has also not been determined what the ratio of the carbon in the bioplastic coating is to that in the cellulose it surrounds and how much this ratio varies from -thread to thread. In view of these uncertainties it would be premature to draw any conclusions as to what effect the presence of this halo or bioplastic coating might have on the present radiocarbon date of 1325 AD.

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From **Dr. Walter McCrone** of the McCrone Research Institute, Chicago, Illinois, U. S.A.

To satisfy your 'mild' curiosity about Garza-Valdes and his *lichenothelia*, I am afraid my reaction to his ideas is not very mild. I think he is out of his mind. In the first place, any sample sent to any carbon-dating lab (and I have sent a large number of them) will be cleaned up very carefully before they determine the carbon date so that in the Shroud case, there was pretty pure linen that was tested.

I send them linen from paintings that has absorbed varnish, media, and pigments and is only about 30% by weight linen and they have to do a very good clean up job before it can be tested. They usually send me back a thread or two to show how well it did clean up. So from that point-of-view, I don't think much of Garza-Valdes idea but, in the second place, in order to change the date of a first century Shroud to 1325 would require that the linen be coated with 2/3 of its weight of modern *lichenothelia*.

I have enclosed a quick graph to show how much material, say *lichenothelia*, that would have to be added to the Shroud to bring the carbon date up to 1325 (66% of the weight of the Shroud [see below]).

Effect of Modern Contamination on the Shroud Carbon-dating Starting with 35 AD as a date for the Shroud canvas assume various percentages of later date carbon components as added*

Age of carbon-containing substances added [graph]

*These figures assume both the original and the added carbon-contaminating substances have closely similar percentages of total carbon. For example, we add linen [to linen], wood to wood or more generally, animal tissue to similar animal tissue or plant tissue to similar plant tissue.

Examples:

Add 1400 AD carbonaceous material to 35 AD
will raise the c date

10%	"	"	"	"	to 170 AD
20%	"	"	"	"	" 315 "
30	"	"	"	"	" 450 "
40%	"	"	"	"	" 515 "
50%	"	"	"	"	" 720 "
60%	"	"	"	"	" 855 "
70%	"	"	"	"	" 990 "
80%	"	"	"	"	" 1125 "
90%	"	"	"	"	" 1260 "
100%	"	"	"	"	" 1400 "

And this assumes, of course, that no cleaning operation occurred. Finally, I have had and observed very closely, over 60 tape samples from the Shroud on which there were by extrapolation from half a dozen tapes, more than 100,000 linen fibres. The only coating that I found on any of those fibres was a paint layer made up of red ochre or vermilion and collagen tempera.

He is very popular in Shroud circles because all of the Shroud people are looking desperately for straws to support their belief that the Shroud is authentic. Since they have been told that they don't have to worry about anything that I have done because there is no pigment on the Shroud, it is all blood, and since they don't understand any of the scientific side of it, they proceed to warmly greet Dr. Garza-Valdes and accept his theory about the carbon-dating being affected by modern carbon. I was interested to hear from Paul Maloney that Garza-Valdes couldn't find enough *lichenothelia* on his sample of the Shroud linen to send him. I didn't see any either on the tape fibres.

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From **Lynn Picknett and Clive Prince**, authors of *Turin Shroud: In Whose Image? The Shocking Truth Unveiled*.

While we realise it is not the 'done thing' to respond directly to reviews of one's work, we do feel that Michael Clift's personal rant [BSTS *Newsletter* no. 39, pp. 19-20] does not actually qualify as such. Of course, he did not address one single point of fact in our book and his curious notion that only scientists and academics should have the temerity to write on the Shroud surely means that neither he nor you should ever do so?

All of this is wonderful stuff! As is the BSTS' line about refusing to share a platform with us at the Fortean Times Unconvention. Apparently, according to Clift, it is BSTS policy not to give talks unless you are paid - which struck us as highly unlikely - does this mean that he doesn't know what the truth is?

But it is entirely in keeping with your personal policy of never lifting a finger for the society without charging for your time, although we note with amusement that you do give talks to girls' schools... Anyway, all we can say is thanks because this arrogant stance has indeed paid dividends and obviously will continue to do so.

You have a rival in inconsistency. Like you, Daniel Scavone of *Shroud News* quotes the carbon dating to argue against our Leonardo evidence... wonderful! It never ceases to bring the house down in talks. And in case you still don't see the point, let us explain. Neither you nor Scavone believe in the carbon dating results but you still quote them against us. Talk about double think!

In the same vein, we are greatly amused to see that when you mentioned the imminent publication of McCrone's work you make the characteristically snide comment about not knowing how those who believe in the photographic hypothesis will be able to deal with it. Are you, then, coming round to the idea that the Shroud is in fact a PAINTING?

Nobody in the Shroud world has yet raised a single major objection to our claims about Leonard's method - or indeed, to the work of Professor Allen [Prof. Nicholas Allen of Port Elizabeth, South Africa, see BSTS *Newsletter* no. 39, p.9], who will be appearing in a documentary with us. All the Shroudies ever do is raise trivial and weak non-arguments, and show all the signs of their own educational shortcomings simply because they cannot read and understand our book properly. It seems to us that they won't deal with our work because they can't. All this blather about refusing to give us the oxygen of publicity serves merely to cover the realisation that none of you have anything worth listening to. And of course, it also gives us ... the oxygen of publicity.

Clift may have urged the membership not to waste their money on our book, but maybe the paperback will prove more of a temptation (soon you won't HAVE to send to the States for one). And unless the membership has your education in German, it may not be a good idea to get hold of *Die Jesus-Falshung*, subtitled *Leonardo da Vinci und das Turiner Grabtuch*. (We note That 'loonies and cranks' is rendered as 'spinner und psychopathen'.)

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From **BSTS member Paul Michelet**

Having recently returned from a trip to India, during the course of which I visited various hill-stations in the Himalayan foothills, I write to inform you that during my stay in Delhi I bought a set of postcards depicting miniatures of Krishna and his consort Radha playing with a flute.

It immediately struck me that the markings on Krishna's forehead [*see right*] bear a striking resemblance to the V-shape which can be faintly seen on the Shroud (mentioned in the Dutch video). On the Shroud the mark is lower and somewhat more angular, but this is less important than the correspondence; today I visited the Hare Krishna restaurant off Oxford Street and there spoke to a young lady who had this marking drawn from the bridge of her nose!

I do not myself support the "coin" theories about the Shroud, but I do think that a mark of this kind could be significant in establishing the fact that we are dealing with a holy man on the Shroud. I include a couple of the miniature reproductions for your scrutiny. I am aware that it is possible to read too much into this, but I think, nevertheless, it is worth pointing out!

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