

## **Doctors at Calvary**

**Some reflections on the recent articles by Drs. Fred Zugibe and Frans Wijffels, from BSTS  
General Secretary Dr. Michael Clift**

It is healthy for the Shroud and Shroudies that controversy continues as strongly today as when carbon-dating hit the headlines in 1988. The medical articles in the last two Newsletters provide a prime example for which I have been invited to act as referee. In the red corner we have a ten page article by Dr Frans Wijffels, a Dutch Physician who seems to be asking, "Did the Turin Shroud once envelop a crucified body?" but who then wanders off into consideration of what crucifixion was like and what was the mechanism of death. For this he cites the experiments of Dr Herman Modder in 1950.

In the blue corner we have an eight page dissertation by Dr Fred Zugibe, an American Forensic Specialist, who seems to be claiming a refutation of Barbet's asphyxiation hypothesis, and who cites the updated experiments of Dr Modder in the 1980s.

Both of these doctors are at variance but have enough common ground to make the operation of sorting them out something like the separation of conjoined twins. Both of them leave much to be desired.

The question of a real crucified body having been the agent for the mysterious image is not a new one so if that were the real point of Wijffels he has not added anything to our knowledge of that. I therefore suspect his real aim was to pour scorn on Barbet. But then his speculations here are not helpful. Whether Our Lord died of acidosis, suffocation, surgical (hypovolaemic) shock, or whatever, it is abundantly clear that his sufferings were extreme. Nothing Wijffels says alters that or in any way helps to explain the image and its clear evidence of crucifixion.

When we turn to Dr Zugibe other problems beset us. Using the two sets of experiments of Dr Modder he tells us that Modder's conclusions are 'invalid' and uses the results of his own contrived experiments to show that the crucified victim could not have pushed himself up to gain extra air but that this didn't matter since the crucified did not die of asphyxia. Again none of this explains the Shroud image - and his studies of the various possible causes of death are really no advance on Barbet.

I found some extraordinary lapses and inaccuracies in both writers. For example it is untrue that breaking a long bone causes haemorrhage and consequent surgical shock; it causes psychic shock which is a different matter. Dr Zugibe thinks the Douglas bag is used for vital capacity. Not so - it is for measuring the gas content of expired air; vital capacity is measured with a spirometer. Both doctors seem to be muddled as to what acidosis means. There are four related conditions: respiratory acidosis, respiratory alkalosis, metabolic acidosis, and metabolic alkalosis. I think we can forget the third and fourth of these. Our Lord probably had respiratory acidosis from enforced shallow breathing causing retention of carbon dioxide. Barbet suggested that this acidosis caused muscle spasm, but he could have been in error here; muscular spasm is more likely caused by alkalosis and it is difficult to see how this condition could have arisen here unless the overall metabolic chaos produced unforeseen effects. All the same it seems clear that both sternomastoid muscles were in spasm allowing Our Lord's head to drop only in the forward position at the moment of death. There is confirmation of this in Saint John's Gospel Chapter 19

Verse 30 "...and he bowed his head, and gave up the ghost". Doctor Wijffels writes of the 'axis of the body' as if there were only one axis, but later corrects himself by adding the word 'median'. We are obliged to suppose that he must mean the head nodded forward. Dr Wijffels also seems surprised at the quick onset of *rigor mortis* but it is well known in medical circles that after trauma, debilitating illness, or long-drawn suffering the onset can be instantaneous owing to a rapid accumulation of lactic acid in the muscles. Dr Zugibe seems not to have noticed one strong piece of evidence of *rigor* on the Shroud. Seen from the back image it is obvious that one leg is bent, as it would have to be in using one nail for the two feet. It would be difficult to maintain this slight bend in life so we conclude it is a *post mortem* sign. Dr Zugibe tells us that the image shows us the body in the standing position, which would have to mean standing on one leg! But isn't it more likely that Our Lord was laid horizontally in the cloth, especially since the 3D picture shows us flattening of the posterior hair and of the buttocks?

Dr Zugibe tells us that the normal respiratory rate is 12 to 16 per minute. I am astonished that any doctor should say this, let alone a Consultant Physician. The correct figure is 18. But then in the same paragraph he seems to think the change of position to get extra air would take place with every breath. It is surely much more likely that one position would endure for several breaths, so his estimate of over 4000 changes must be wildly wrong, and is therefore no evidence at all for or against the asphyxia hypothesis.

It is wise and kind of any reviewer to find good things amongst those he criticises, but I cannot do so here. Firstly it is not at all clear what point each of the Doctors is making, and this is not helped by the use of turbid and turgid prose, unexplained medical terms, and unexplained reasoning - for example: if breaking the legs did not induce asphyxia why was it done? If the V-shaped blood flow is not owing to change of position what is it owing to? And why introduce the irrelevant and out-of-place distance/colour correspondence (top of page 29 Newsletter 52)?