

## **DR FRED ZUGIBE - A REPLY TO DR MICHAEL CLIFT'S COMMENTS**

The purpose of my paper, **“Victims of Crucifixion Were Unable to Push Themselves Up While Fastened to the Cross”**, was to present the results of two of my recent experiments that add further support to my previous studies that the straightening/sagging theory of Barbet was not tenable and that the V- shaped configuration of the hand wound image could not be attributed to a change in blood flow due to straightening and sagging. I am very perplexed by Dr. Clift's comments because he appears to be entwining my paper with that of Dr. Wijffels. The following statements made by Clift are illustrative:

**1.** *“Dr. Fred Zugibe, an American Forensic Specialist who seems to be claiming a refutation of Barbet's asphyxiation hypothesis and who cites the updates experiments of Dr. Modder in the 1980's.”* This is totally false. A review of my article reveals that it makes no reference to any updates experiments of Dr. Modder and, indeed, makes absolutely no reference to Modder, whatsoever. [Clift seems to have confused my article with that of Dr. Wijffels, where Modder's experiments are discussed at length.]

**2.** *“Using two sets of experiments, 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 this didn't matter since the crucified did not die of asphyxia.”* Again, this assertion is absurd. My article makes no mention of Dr. Modder and I am totally at a loss as to how my experiments have any relation to Dr. Modder. If Clift is referring to my refutation of Barbet's Asphyxiation hypothesis where he asserts that the crucifixion had to straighten from a sagging position in order to breathe, then he has missed the point. My original suspension experiments demonstrated that our volunteers had no difficulty breathing in the sagging position and these recent experiments further demonstrated that the straightening position is not physically possible even by our volunteers who were in excellent physical condition.

**3.** *“Again none of this explains the Shroud image-and his studies of the various possible causes of death are really no advance to Barbet.”* The purpose of my paper was not to explain the Shroud image. Instead, the objective was to elucidate the various scientific mechanisms of crucifixion as I have done for over 50 years. To assure a full understanding of certain medical aspects of the Shroud, one must understand the various mechanisms of crucifixion and to apply them to the study of the Shroud. My work is unquestionably an advance to Barbet because myriad articles have been written that quote and attribute as fact, Barbet's hypotheses regarding sagging and straightening, the bifurcation pattern and other hypotheses and use them to support Shroud authenticity. Unfortunately, these hypotheses of Barbet are not tenable and truth in science demands that they be identified and corrected.

**4.** *“Zugibe tells us that the image shows the body in a standing position which would mean standing on one leg! But isn't it more likely that Our Lord was laid horizontally.”* This is also false. I have never mentioned anything about the image showing the body in

a standing position. Interestingly, it is Dr. Wijffels who discusses the standing position of the Man of the Shroud in his last paragraph.

5. *“Both doctors seem to be muddled as to what acidosis means.”* I never mentioned or discussed acidosis in my paper. Again, it appears that he has oddly confused my paper with that of Dr. Wijffels who discussed acidosis in his paper.

6. *“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.”* I never discussed the breaking of a long bone in my article. It is obvious that in this particular instance he was referring to a statement made by Dr. Wijffels. However, a full discussion of the various types of shock is rather complicated and beyond the scope of this rebuttal. Traumatic fractures of the long bones such as femoral fractures, indeed, frequently cause hypovolemic shock due to hemorrhage. The term *surgical shock* in this scenario is incorrectly used by Clift as *surgical shock* refers specifically to shock, usually hypovolemic, which occurs during or after a surgical operation and psychic shock is a shock-like condition produced by strong emotions due to severe psychological trauma of various kinds.

*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? Both of his questions have absolutely nothing to do with the purpose of my article. The purpose of the experiment was not to identify why the legs were broken or what the bifurcation blood image pattern on the wrists are due to but to show what they were not due to. These experiments demonstrated that the legs were not broken to prevent “straightening” and the bifurcation pattern did not result from “sagging” and “straightening” as hypothesized by Barbet. My opinion as to the why the legs were broken and probable of the bifurcated wound pattern has been expressed in previous writings.*

There were, however, two, relatively minor errors that I made in haste just as BSTS made errors in my credentials where they listed the degrees after my name as M.D., F.A.C.G., P.G. instead of M.D., Ph.D., F.C.A.P., F.A.A.F.S., F.A.C.C. I have no idea what F.A.C.G. or P.G. stands for. In the first instance, Clift writes, *“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.”* Unfortunately, this was a typo error made in haste. In this regard, the sentence in my paper that read, *“..the volunteers started to hyperventilate several minutes of being suspended because the position on the cross causes a decrease in the vital capacity (determined by our Douglas bag studies).”* should have read *“the volunteers started to hyperventilate several minutes of being suspended because the position on the cross causes a decrease in the vital capacity (determined by our spirometry studies).”* In the second instance, Clift relates *“He seems to think the change in 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. In this instance, in my haste I inadvertently left out the last part of the sentence. "Another fact to mull over is that the average respiratory rate is 12 to 16 beats per minute and in the scenario proposed by Barbet, the crucarius would have had to straighten himself by pushing against the nails in excess of 4000 times during the 6 hours on the cross even at a normal respiratory rate of 12" should have read, "Another fact to mull over is that the average respiratory rate is 12 to 16 per minute and in the scenario proposed by Barbet, the crucarius would have had to straighten himself by pushing against the nails in excess of 4000 times during the 6 hours on the cross at a normal respiratory rate of 12 but even if it were only one respiration per minute, he would have had to raise himself in excess of 360 times.*

I don't wish to appear pompous in refusing to vouchsafe a reply to the statements made by Mr. Leitsch regarding my work but as Alexander Pope so aptly wrote, *"A little learning is a dangerous thing; Drink deep or taste not the Pierian spring; There shallow draughts intoxicate the brain, And drinking largely sobers us again."* Studies regarding the medical and scientific aspects of crucifixion are a highly specialized field and the Rosetta Stone for understanding and interpreting these findings can be found in higher, specialised education, and in experience and experimentation. Kraemer (*The Pharos*, pp. 7-12, 1992 ) poignantly points out, *"When those without adequate training in a particular field are permitted to influence progress in a particular field (even those with excellent training in another field ), the problem is not merely that they are likely to produce lies, but that their lies may impede others' search for truth in that field. It is vital to medical research that amateur science be discouraged, that appropriate professional training or oversight in each field be required before proposals are approved or papers accepted for publication."*