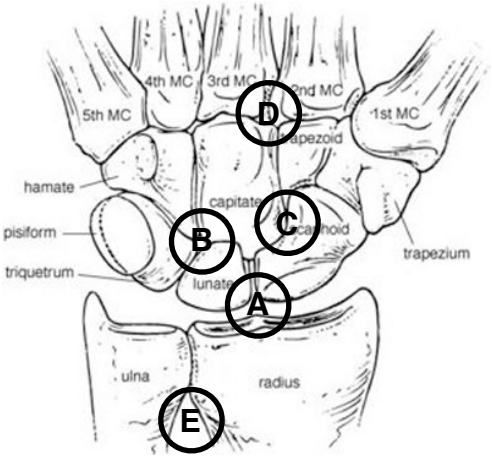
RECENT PUBLICATIONS (4)
SCIENTIFIC PAPERS

DO WE REALLY NEED NEW MEDICAL INFORMATION ABOUT THE TURIN SHROUD

M. Bevilaqua, G. Fanti, M. D'Arienzo, R. de Caro
in Injury, The International Journal of the Care of the Injured
Review by Hugh Farey

There is a lot to be said for assuming the image on the Shroud of Turin was created by a natural process emanating from a dead man covered by it. The image can then be treated, as many pathologists have treated it in the past, as a photo of a corpse, and any distortions, irregularities or improbable proportions taken as corresponding to the body in question, and not to the way the Shroud was wrapped or draped on the body, or, indeed, to the incompetent draughtsmanship of a medieval painter. With that axiom firmly in place, the authors have focussed on 8 irregularities that they consider have so far been neglected, or only superficially explored.

1) They first determine that the nail through the left wrist pierced the space between the radial, scaphoid and lunate bones (A). I believe this to be a new idea. Barbet's "space of Destot" (B) was criticised by Fred Zugibe, but he suggested either the space between the Scaphoid, Lunate, Trapezium and Capitate bones (C), or the space between the Second Metacarpal, Capitate and Trapezoid bones (D). This last I think very unlikely as the angle of the nail is so different from the direct route through a hand to a beam. Various other possibilities



have been suggested (between the radius and ulna (E) for example), but largely rejected. The authors go on to deny that damage to the median nerve would have had the retraction effect on the thumb that previous pathologists have suggested, and think it more likely due to an injured flexor pollicis longus tendon.

2-4) The next three anomalies listed by the authors (the crossing of the hands on the pubis, the unnatural extension of the right arm and the asymmetrical shape of the shoulders) are attributed to the dislocation of the right arm. This has been suggested several times previously. However, the authors also associate this with heavy blunt trauma to the back, specifically the right brachial plexus, resulting in Erb-Duchenne paralysis, which is less obvious and more speculative, although by no means improbable given the circumstances.

5-6) This same injury, claim the authors, is responsible for the retraction of the right eye into its socket, and the extension of the fingers of the right hand (or at least their relaxation into extension via paralysis of the right arm).

7) Damage to the left brachial plexus is then adduced to account for the flexed fingers of the left hand. I'm not sure this is necessary; it seems a little like special pleading - hunting for specific possible neural injuries to account for every last aspect of the body on the cloth.

8) Finally, the chest wound is discussed, and the idea of a simple stab to the heart dismissed in favour of a haemothorax, probably caused by blunt injury to the chest. This has been proposed several times before.

Overall this paper represents an exploration within fairly traditional parameters rather than the discovery of anything startlingly new, but it was well worth the reading, and introduced me to a number of traumatic symptoms I was unfamiliar with before.

A STOCHASTIC PROCESS TO EXPLAIN THE TURIN SHROUD BODY IMAGE FORMATION

Giovanni Fazio
in The Journal of Modern Mathematics Frontier
Reviewed by Hugh Farey

The Journal of Modern Mathematics Frontier is one of those 'open-access' publications in which anybody can publish more or less anything, with minimal supervision. Fazio's paper is deeply flawed, and his conclusion, that his proposed mechanism "is the sole that can explain both the reversed color characteristic and the 3D reconstruction without distortion of the above image" is wholly unjustified. Nevertheless, the paper is a serious attempt to contribute to sindonology, and is therefore worth reviewing.

In this context, a stochastic process is one which produces a random distribution of its effects rather than a continuous one. Imagine watching rain beginning to fall on a smooth concrete surface. The surface does not become uniformly more damp until it is wet, but instead individual droplets show up as little patches of moisture, until eventually they all overlap. This process is stochastic.

Fazio observes that the colour intensity of the image on the Shroud is determined by just such a process, from areas in which a very small proportion of fibrils are discoloured compared to the pale background, to areas where all the fibrils are discoloured, producing a darker image although each discoloured fibril on its own is equally dark.

In a previous paper John Jackson et al. derived a mathematical equation from these observations, saying that the darkness of the image was composed of the background colour of the Shroud, further darkened by a correlation between image and body/cloth distance. (The smaller the distance, the darker the colour). Fazio applies this equation, by analogy, to a purported reason for the production of the image, namely weak

electromagnetic radiation. His restatement of Jackson's equation says that the darkness of the image is created by some sort of "background" radiation, further darkened by radiation whose intensity is related to the cloth/body distance.

Unfortunately Fazio cannot explain where the "background" radiation, producing the non-image colour of the Shroud, might come from, and is pretty hazy about where and how the energy to discolour the image fibrils comes from either. "It is believed that the triggering of this process might be due to the emission of thermic energy," he speculates, "and the low-temperature chemical processes between reducing sugars and amines [producing] conjugated carbonyls that colour the fibrils." Here he confuses physics (thermal radiation) and chemistry (the transmission of gases), without explanation.

Essentially Fazio thinks that some sort of chemical reaction on the surface of the Shroud was mediated by the warmth of the body under it. This warmth was only just enough to trigger the chemical reaction, which occurred stochastically, producing the uniformly coloured, but randomly distributed fibrils that we see at any particular place on the Shroud, the proportion of which, compared to the fibrils which did not receive sufficient energy to discolour, accounts for the varying darkness of the image.

He may be correct, but this paper does nothing to demonstrate his hypothesis, much less provide the sole explanation for the creation of the image that he claims.