BRITISH PROPOSALS FOR A FRESH STUDY OF THE SHROUD OF TURIN

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In the wake of the STURP scientific proposals for renewed study of the Shroud, submitted last year, * a group of British specialists presented their recommendations to His Eminence Cardinal Ballestrero at an informal meeting in Turin on July 2nd of this year. The British proposals, translated into Italian, had been drawn together on behalf of the British Society for the Turin Shroud. They were warmly received by the Cardinal; he made clear, however, that the final decision-making in regard to any new access to the Shroud rested with Rome, and that patience was needed before fresh work on the Shroud might be allowed.

The British proposals have been prepared in full consultation with STURP and other groups, and in the spirit of Cardinal Ballestrero's plea for international collaboration and cooperation. They are intended to supplement, rather than to compete in any way with recommendations made by other groups. For instance, with regard to radiocarbon dating, the view was expressed to Cardinal Ballestrero that most of the interested persons in Britain regard this as the single most important element for any new work to be done on the Shroud. But the British proposals, which are for a series of individual, clearly delineated projects, do not include a specific radiocarbon dating project because British laboratories, fully endorsed by the British Society for the Turin Shroud, have been included in the recommendations made last year by STURP. There has been excellent U.S.-British consultation on this issue, and here in Britain we warmly support Dr. Robert Dinegar's careful methodology.

Accordingly, the British proposals have been designed, in the main, to bring to the subject expertise not represented or available to other groups; also to provide a fresh, independent approach in areas where there is a serious conflict of professional opinion.

One particular field in which Britain can offer a fund of specialist expertise is that of the archaeology of textiles, and the British Society has been fortunate to receive the willing involvement, in any fresh opportunity to examine the Shroud, of Dr. John P. Wild, Senior Lecturer

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* See "A Scientific Proposal for Studying the Shroud of Turin", *Spectrum* #13, December 1984. [Ed].

in Archaeology at the University of Manchester, and a close colleague, Gillian Eastwood, Manchester-trained specialist in Near Eastern archaeological textiles. Miss Eastwood and Dr. Wild would hope to give particular attention to a study of the edges of the Shroud, potentially valuable for clues to the Shroud's history and origins, yet bypassed by previous researchers because the edges are normally hidden by the Shroud's protective blue surround. Miss Eastwood remarks in her recommendations:

> The existence or otherwise of some form of end or selvedge needs to be determined and properly documented. Similarly the published works concerning the Shroud make no reference to the type of seam used—an aspect of the subject in which I am particularly interested. Currently I am developing a typology of seams which were used in Egypt and the Near East. This typology stretches from the fourteenth century B.C. (the site of Tell el-'Amarna, Egypt), to the early sixteenth century A.D. (Quseir al-Qadim, Egypt). Although it should be stressed that any individual seam cannot be taken as conclusive evidence of origin, nonetheless it would be interesting to know whether the intriguing lengthwise seam to one side of the Shroud fits within this typology of Near Eastern seams and hems. In addition it would be important to determine the original function of this seam. It may have constituted an original extension, or it may derive from a later repair ...

Additional expertise on the Shroud's manufacture as a textile would be forthcoming from John Tyrer, textile analyst of Manchester, who is already known to *Spectrum* readers (see *Shroud Spectrum* #6, March 1983).

Where British specialists would hope to help clarify a particularly heated prevailing controversy is in the field of microanalytical study of the Shroud's body and blood images. It is well known that Doctors Heller and Adler of Connecticut identify the "body" stains (i.e., those of the face, beard, and other physical features) as deriving from some form of cellulose degradation, and that they identify the "blood" as genuine blood, determinable by some eleven different tests. It is equally well-known that the Chicago microanalyst Dr. Walter McCrone, working from the very same set of samples, has insisted that both types of image are composed of iron oxide in a gelatin binding medium, and are thereby the work of an artist. In Britain such contradictions have caused considerable confusion and uncertainty, and the task of determining the truth has been further complicated by Don Fossati's valuable historical studies (*Spectrum* 12 & 13), indicating that it was common practice for artists copying the Shroud to press their works against the original, thereby inevitably transferring misleading paint-dust to the Shroud's surface.

In view of the obvious need for independent appraisal, the British Society has been fortunate to receive the willing involvement, in any fresh opportunity to examine the Shroud, of Dr. Geoffrey Allen, visiting Professor of Chemistry at the University of Southampton and

senior scientific advisor to the Berkeley Nuclear Laboratories in Gloucestershire. At the Berkeley Nuclear Laboratories, Dr. Allen has access to extensive facilities for scanning electron microscopy (SEM), energy dispersive X-ray analysis (EDX) and electron microprobe analysis (EPMA), together with equipment for two new methods which he considers may be particularly valuable for Shroud studies: scanning auger microanalysis (SAM) and scanning ion microscopy (SIM). Britain's Central Electricity Generating Board has generously agreed to make all this equipment available for study of Shroud samples and, as pointed out by Dr. Allen, the samples required from the Shroud (from "body", "blood" and non-image areas) would be so small as to be all but invisible. These would be teased from the Shroud's surface with scalpel or fine needle, rather than by sticky tape, which is considered too unselective. Backing up Dr. Allen's analyses from the forensic viewpoint would be Professor James Cameron of the Department of Forensic Medicine at the London Hospital (and one of Britain's leading Home Office pathologists), together with a colleague, Dr. Patrick Lincoln, haematologist; also Dr. Graham Dival and colleagues at the Metropolitan Police Forensic Science Laboratory in London. As Dr. Allen remarked in his proposals:

> The results obtained could be more definitive than those obtained hitherto because the chemical and physical properties of materials depend directly on their composition and structure at the microscopic level. The ability of the most modern techniques to probe the nature of such small areas of materials with high sensitivity and selectivity should greatly aid their characterisation of subtle surface variations.

While the above recommendations are considered the most important elements in the British proposals, certain additional suggestions have also been included in the hope that they might disclose features or facets of the Shroud as yet unrealized. At London's Metropolitan Police Forensic Science Laboratory, one particularly useful method developed in recent years has been the diffused laser beam to study surfaces of interest. In criminal detection work, this has revealed otherwise invisible shoeprints, fingerprints, erased writing, differences in inks and paints, clothing stains, fibres, etc., often where all other methods have failed. The method is entirely safe and non-destructive of the object under examination, and although it was previously necessary to take items for study to a specialist laboratory, recent developments with a Neodymium Yag laser promise to make the technique portable, and therefore readily applicable to the Shroud. Mr. Kenneth Creer, the specialist in this technique at the Metropolitan Police Forensic Science Laboratory has kindly volunteered his services and equipment for any fresh study of the Shroud.

In addition, fresh work in ultraviolet light photography has been proposed by Raymond F. Ruddick, photography specialist at the London Hospital Medical College Department of Forensic Medicine. And a proper, photographically documented survey of the underside of the

Shroud, using a urological endoscope to obviate the need for removal of the Shroud's backing cloth, has been volunteered by Professor John Blandy of the Department of Urology at the London Hospital Medical College.

As already stressed, the British proposals have been designed to supplement rather than to compete with the work of others. One project strongly urged on the part of other researchers is a check of the pollen analyses of the late Dr. Max Frei. While unfavorable remarks have sometimes been made about Dr. Frei's methodology, such remarks can only be considered unjustified and unsubstantiated without a replication of Dr. Frei's work on the part of some other acknowledged expert in the same field. We understand that ASSIST has procured the cooperation of one such specialist, Dr. Aaron Horowitz of the Tel Aviv University Institute of Archaeology. We warmly support this development.

It is to be hoped that a fresh study of the Shroud, when and as permitted by the ecclesiastical authorities, will be a true model of international understanding and cooperation.