

Study Of Shroud Feature Evidence Using Video And Photogrammetric Analysis Methods

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Abstract:

A recent hypothesis concerning a somewhat circular area of background contrast around the head of the Man of the Shroud of Turin, which has been detected in different Shroud photographs, taken over the years, was submitted for study using photogrammetric analysis methods. The purpose is to compare features depicted in artworks considered to be associated with the actual Shroud to determine if there are any measurable similarities in photographs of the Shroud. Quantifiable means were used to isolate patterns in photographs for comparison with the artworks. Considerations included: homogenous brightness (photo-density); color (hue, intensity, saturation); composite video factors; and, component color factors. When the application of isolation factors resulted in detection of a contiguous pattern existing in a Shroud photograph, the pattern was considered to be qualified for comparison to the artworks. Comparison evaluated coincidence of size, shape, angularity, and position.

The study applies universal automated pattern recognition fundamentals to selected Shroud of Turin patterns suggested through human visual observation. The study accounts for electronically separated cohesiveness of the subject patterns on the Shroud to determine if they are verifiable aside from human visual observations.

The detected patterns are considered most qualified if they are present in photographic images taken at different times, by different photographers, and using different methods. The artworks used predate the photographs by many centuries. Historic artworks and photographs of the same region-of-interest were compared with patterns deduced from the electronic image analysis. This separated subjective from objective recognition of the patterns used for test comparisons.

This study of these patterns employed both vintage and modern means for image analysis. A significant effort was made to employ photography software applications and common television test instrumentation currently and readily available to the public. Therefore, these tests can be readily duplicated by persons familiar with the practice of properly capturing electronic images for the purpose of computerized image processing and analysis.

The images used were provided by the author and Dr. Petrus Soons. These include photographic works by Barrie Schwartz and Vernon Miller. Other electronic image analysis resources,

photographic images and copies of artworks used in the study are part of the Shroud Exhibit and Museum, Incorporated collection in Alamogordo, New Mexico. Additional research is being conducted at the museum.

CONCLUSION: Some patterns detected and compared have been shown to appear in both the photographs and in historic artworks of the Shroud. This demonstrates the artist was depicting something on the Shroud, unique to the Shroud. Therefore, the date of origin of the artwork must also be a date the Shroud was in existence.