

Excerpt from:

E' Utile L'Analisi Radiocarbonica Per La Sacra Sindone? (Is Radiocarbon Analysis Useful For The Holy Shroud?)

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[...] Despite the most optimistic forecasts of those who hope for radiocarbon analysis for the Shroud fabric, a first series of difficulties always comes from the recognized limitation of the method itself, a limitation deriving from three uncertainties that we list, even if of technical character.

1. Uncertainty about the precise value of the C14 half-life even if it is now known with a good approximation (5745 + 50; 5685 + 35).
2. Possibility that in the past there have been variations in the intensity of cosmic radiation; they would affect the values of C14 concentrations in ancient times.
3. Decrease in current C14 activity due to "dead" CO₂ introduced into the atmosphere by the burning of enormous quantities of fossil fuel during the past 50 years.

PERTURBATING ELEMENTS

To these uncertainties we must add a no-small concern that arose from the analysis of a thread taken from the Shroud over a century ago, examined under the scanning electron microscope: that is, having found a remarkable quantity of heterogeneous material that could be an obstacle because it is difficult to eliminate and could therefore also distort any analyzes. Here are the comments regarding the findings formulated by the researchers P. L. Baima Bollone, P. Coero Borga, E. Morano as published in the review *SINDON*, (n. 26, October 1977, pp. 18-19.)

"a) The presence on the Shroud thread of foreign material and, in hypothesis, of pollen is in perfect agreement with the palynological findings of FREI which, at the private exposition in 1973, took numerous pollen grains from the surface of the Shroud's weft, through the direct application of adhesive tape tabs.

b) The presence on the Shroud thread of hyphae and fungal spores is in perfect agreement with the observations of EULA which, at the 1931 exhibition, had had the opportunity to detect, on the surface of the cloth, the presence of small colonies of *ifomiceti*; it is clear, however, that the fact that the thread examined by us has been stored separately from the cloth for over 100 years may have conditioned the presence of a fungal population with qualitative and quantitative differences with respect to the specimen.

c) In any case, the proof the possibility of a contribution of living biological material, in a percentage estimated to be above 10%, constitutes a reason for caution and reserve in the carrying out of all the laboratory investigations that have been proposed and, in the case their execution, prudence in interpreting the results. In particular, it is evident that the extraneous material described and illustrated by us leads us to take into consideration the problem of the most appropriate means of cleansing, especially as a function of the hypothesis of execution of research and dating with the C14, whose approximation limits are heavily enhanced by the application of the material itself ".

A recent clarification was made by an authoritative expert on the subject, Jacques Evin, engineer of the CNRS and director of the Laboratory for radiocarbon of the University Claude Bernard of Lyon in the *Contre-Réforme Catholique* magazine, June 1983, suppl. pp. 5-6. His judgment is twofold: both on the new method of analysis in which an electrostatic accelerator is used and on the advisability or not of using it for the dating of the Holy Shroud. To the clear and precise question at the end of the article: "Should we **now** submit a fragment of the relic to this method of radiocarbon dating," it responds equally clearly and concisely: "Well, in our opinion, the answer is still **not** carried out with all the methodological guarantees."

But not always those who support the need for radiocarbon analysis for the Holy Shroud are sufficiently and adequately informed on the literature that refers both to methods based on the radioactivity of the elements and in particular of carbon and to events, sometimes very lucky as reported that the Shroud has suffered over the centuries. Ultimately the great illusion still and always emerges, favored by incomplete press information, that with such methods it is possible to arrive at a rigorously precise dating. Which is not, as Evin himself points out: "The interval of certainty will be around two hundred years around year 0 of our era and three hundred years around 1000 AD. These intervals may be reduced, but we can never get with the ^{14}C a date to the year, or even to the nearest ten years."

A very enigmatic and disconcerting piece of news that leaves us perplexed about the outcome of the radiocarbon analyzes applied on minimal samples of material from finds of particular historical-archaeological value is the one that can be read in the recent volume of Mons. Giulio Ricci, 3rd edition of the work The Man of the Shroud is Jesus about the Sudarium of Oviedo. Dr. McCrone was commissioned to prepare the sample destined for examination at C14 formally delivered on September 27, 1977, to his laboratory in Chicago. The textile material, volatilized and condensed in a sealed glass container, for the elaboration of the Cyclotron, was immediately sent to the Lawrence Berkeley laboratory of the University of California: the results are still awaited, as due to technical instrumental reasons they postponed the execution (p. 226)."

Unfortunately, the many questions that such a fact leads to ask remain unanswered and consequently doubts increase that the method can give a complete and satisfactory result. Another series of difficulties comes from the concrete case. Who can you entrust with a task of this kind? The financial question may also have an impact since, from the information obtained, such analyzes must be carried out in specialized institutes at a price ranging from a reasonable figure to very high remuneration.

Considering this other practical difficulty, it is to be assumed that if the responsible Authorities decide to allow radio-carbon analysis, this should take place under certain conditions.

- 1) Examination of at least three different samples of threads or fabric fragments (including one of the Shroud) classified only with numbers or initials. The main Egyptian museums (Turin, London, Paris) could collaborate in offering material that is partly dated with certainty and partly undated.
- 2) Examination to be carried out in different institutes aware of the specific conditions that accept to carry out the research free of charge given its exceptional nature.
- 3) The final results, with the relative indications of the various samples from different sources, will be communicated by the Commission in charge of the research only if a plausible coincidence of the data is found to guarantee the validity of the method used and above all the outcome agrees with the examinations regarding the samples taken from the Shroud. Its export conditions may seem too demanding and limiting but we believe them to be indispensable for a comparison on the validity of the proposed method and to be certain that no interest, of any kind, and no preconception will veil the objectivity of the research.

OPEN QUESTIONS

After the exposition of these data some considerations are still necessary that it is good to explain. Gallino [*R. Gallino. "Willard F. Libby e il C14," in Sindon, n. 29, December 1980: pp. 44-47*)] concluded, "Having therefore established that it is now possible to obtain a dating of the Shroud fabric by taking a small section of thread, it is clear that such direct scientific evidence on the age of the fabric could provide an extremely valuable contribution ... **while recognizing that dating it is just an element to get us closer to the reality of the Shroud.**"

Nobody is obliged to accept the authenticity of the sacred Shroud, but if the radiocarbon examination gives a positive answer, declaring that the find can date back to the first century even though there are unavoidable discards that are included in the final count, those who do not accept will at least have to review their positions of doubt or prejudice to take note of these new acquisitions that they complete a picture already abundantly fed with favorable evidence.

Certainly, in their judgment, the word control will always be missing: **This is Christ**, which emerges instead from the inter-disciplinary researches carried out, sufficiently probative and such as to give the moral certainty that that Sheet is a sincere and genuine testimony of the passion, death and resurrection of Christ. If the result is positive, giving the certainty that the fabric dates back to the time of Christ, this answer would prove unfounded the various hypotheses of an artefact artfully manufactured in good or bad faith in the following centuries (including the hypothesis of an exceptional crucifixion, similar in all to that of Christ, for the value that can and must be given to the calculation of probabilities exposed from the beginning of the controversy on the Shroud

by Yves Delage and then taken up by other authors). Otherwise, if the outcome were negative, and the sheet shows to be of more recent manufacture, therefore not attributable to the burial of Christ, it will always remain to prove: - who is that person who has left his footprints on that sheet, - by whom the forgery was prepared; - where, how, when and why it was done. Until it is scientifically and clinically proven with valid evidence that it is a fake, as, for example, was made for the so-called Cadouin shroud, the Holy Shroud with its somatic and blood imprints would always remain a sign of the Father's love for humanity as the same passion and death of Christ so plastically represented in all the various phases. The accumulation of questions that come from exegesis, from archeology, from the silences of history do not destroy that reality that remains and will remain an indecipherable mystery for all those who approach it with prejudice and without humble discernment. How many are the mysteries of nature for which no satisfactory explanation has been given; yet they exist and they urge us with their attractiveness.

Since one cannot doubt that those footprints portray the passion as Christ could undergo it, the hypothesis, already put forward in other circumstances by scholars of the Shroud, of a prodigious fact inserted, without our knowledge, into the the history of humanity, for which the singular find would continue to be a sign that inspires and fosters devotion to Our Lord: like crucifixes.

On the validity or otherwise of a radiocarbon analysis, some studies observe that if the Shroud were really the sheet used in the burial of Christ, the results of such an analysis might not be exact because they are altered, in some way, by the phenomenon of the Resurrection. Such an objection does not take due account of the clear distinction that exists between the natural order and the supernatural order and assimilates the event of Christ's Resurrection to a pure natural fact. The Resurrection is essentially a mystery, the object of our faith and cannot be analyzed according to common scientific knowledge. For that clear distinction that exists between natural and supernatural it is to be assumed that all that exists of material on the Shroud can have a non-miraculous origin. However, if, despite all the research, it is not possible to give a reasonable explanation to the complex set of problems that are under our investigating eyes, only then can it be admitted that superior forces have intervened to produce that single example.

NECESSARY COMPARISONS

In the hypothesis of a possible radiocarbon analysis for the Shroud, a wider study is required with adequate research also for other objects that may have had a more or less direct relationship or dependence with the Shroud, from the - historical and iconographic.

- We want to allude, as already done in other articles
- to the Sacred Face of Genoa,
 - to the Edessen image of the Vatican Palaces (Matilde Chapel)
 - to the sacred Table of the Lateran,
- to the so-called "Veronica" preserved in St. Peter's Basilica.

A very special relief is to be made on the Edessen image with support, visible in some parts of the peeling painting, judged to be served in the Matilde Chapel of the Vatican Palaces whose canvas by Bertelli and Fasola seems to be herringbone.

And also on the Sacred Face of Genoa which on radiography and tomography shows two faces very different from the one seen; indeed the one revealed by the tomography seems to be **with closed eyes**.

Therefore, there is a need for a parallel analysis that can give results of great interest and clarify many obscure details about the origin of those objects that in some way can be linked to the Shroud. It is the comprehensive and comprehensive study that scholars hope to be able to carry out. For this, great decisions are needed that can only come from above, as it came for the examination of the wooden Chair of St Peter in the Vatican decided by Paul VI who in 1967 appointed a special Commission in charge of "studying the question and presenting do a work plan." The conclusions of the Commission were approved by the Pope with a letter from the Cardinal Secretary of State, Card. Marella of 11 July 1967 and the execution of the project was subsequently entrusted to a more restricted Commission appointed on 10 July 1968. Although serious doubts about the authenticity of the Chair had been expressed several times, only after the careful examinations, including that of the radiocarbon analysis, did we reach a definitive conclusion that traces the Chair back to the era of Charles the Bald (833-877). **These historical precedents leave us to hope that, with time, we can also reach a satisfactory conclusion for the Holy Shroud about the approximate age of the same and consequently about its authenticity.**