

## Obituary

Luigi Gonella 1930 – 2007

Amongst Turin's one million population, one man last century stood out as the individual closest to, and undisputed coordinator of, all international scientific inquiry into the Shroud – and in particular the carbon dating carried out in 1988. This was Professor Luigi Gonella, who died last August, at the age of 77.

Born in 1930, Gonella's early training was as an engineer and physicist. At the age of 23 he joined Italy's National Institute of Nuclear Physics, the INFN, specialising in nuclear instrumentation and metrology (the science of measurement). In the late 1950s he went to Iowa State University in the United States, an experience from which he acquired a fluency in English then rare amongst Turin's academic community.

Returning to Italy in 1961 Gonella first became a university teacher to the Faculty of Sciences of the University in Turin, before joining the Department of Physics at Turin Polytechnic, to take charge of the fields of metrology and scientific measurement instruments. As a scientist, he was noted for his unusually strong command of, and fascination for, ancient and modern history.

In 1978, when Turin's then Archbishop, Cardinal Ballestrero, sought an advisor on scientific matters pertaining to the Shroud, Turin's local education establishments put Gonella's name forward as the best man for the task. And so began his long and controversial involvement with the subject, an immediate highlight being the STURP scientific examination of October 1978, during which his broad scientific knowledge and his fluency in English (as a result of his long stint in the U.S.), made him ideal for liaison with the two dozen-strong American team.

Following the 1978 STURP examination more scientific projects began to be considered, with a particular emphasis on radiocarbon dating. Very recent developments of the new AMS method meant that in future much less sample would need to be destroyed in any carbon dating test of the Shroud. And Gonella, with his specialist knowledge of nuclear instrumentation, was particularly well equipped to deal with such issues, responsibilities that, as a deeply committed Catholic, he took very seriously.

Gonella therefore enjoyed several years of supremacy as Cardinal Ballestrero's closest scientific adviser on Shroud matters. But when in March 1983 there died in Portugal the long-exiled ex-King Umberto of Italy, whose family had owned the Shroud throughout the last five centuries, Umberto's will decreed that Pope John Paul II and his successors should become the Shroud's new legal owners. Although the will included a proviso that the Shroud should stay in Turin, the problem for Gonella was that henceforth the Vatican needed to be consulted on any scientific approaches to the relic. And Rome, of course, had its own scientific advisors, ones arguably rather more high-powered than anyone in Turin ....

At around that time I was coordinating several British scientists' proposals to conduct further tests on the Shroud, involving regular communication with Gonella. On occasion he would lengthily telephone me at my Bristol home. Despite the fluency of his English, it was also heavily accented, and when he began speaking quite angrily about 'Chagas', at first I had no idea what he meant. Soon, however, it became apparent that 'Chagas', was Professor Carlos Chagas, president of the Pontifical Academy of Sciences, and thereby his Rome-based counterpart. At a meeting in New York, Chagas had apparently come across some of the British and American scientists keen to radiocarbon date the Shroud. They had even talked of holding a workshop to discuss this.

Immediately Gonella heard of the plan, he insisted that any such gathering be held in Turin, also that it should remain confidential. Then he blew several fuses on learning that Chagas had inadvertently mentioned something of what was afoot to British journalist Peter Jennings. Jennings' disclosure caused the meeting's postponement at very short notice, apparently at Gonella's behest, enraging the radiocarbon dating scientists. The latter began making protests at the highest level, invoking Sir David Wilson, then Director of the British Museum, and threatening to walk away from the whole idea. In the course of this, Gonella even asked for my help as a mediator. When the meeting eventually became held in the October of 1986, Chagas patiently chaired it, and one major decision that it came to – as what became known as the 1986 protocol – was that seven radiocarbon dating laboratories should be involved, some of these using a refined version of the original carbon dating method.

Gonella, however, seems to have been determined to regain the driving seat, and in the course of the ensuing months back-stage decisions became taken that significantly altered Chagas's protocol. Thus it came about, in initiatives seemingly insisted upon by Turin, that only three laboratories should take part in the carbon dating. Because all three chosen used exactly the same AMS method, this immediately meant an abandonment of some of the 1986 protocol's safeguards. This situation was made worse on April 1988, when the actual sample-taking was done. Only one highly inadvisable location was chosen, a decision which, according to those present from the carbon dating laboratories, was taken actually on the spot either by Gonella or his friend Riggi, in the course of a heated argument between the two scientists.

As a metrologist Luigi Gonella passionately believed in measurements. In the wake of the radiocarbon dating result he told reporters: "I have no scientific reason to think the testing was inaccurate." Nevertheless, from his excellent knowledge of the history of science he made the very important addendum that science can sometimes change its mind. "Any scientific result is acceptable on its face value," he said. "Yet even the law of gravity may turn out tomorrow to be in error."

A devoted family man, Luigi Gonella never properly recovered from the loss of his beloved wife Beatrice, and when I last met him in 2002 he had aged markedly, and seemed already to be seriously ill. Even so he stayed in touch with Shroud matters, such that when in 2005 STURP scientist the late Dr. Ray Rogers published his *Thermochimica Acta* paper claiming that the Shroud had been rewoven in the area chosen for the carbon dating sample, Rogers acknowledged that some of his help had come from Gonella, and surprisingly recently. According to Rogers:

'on 12 December 2003 I received samples of both warp and weft threads that Prof. Luigi Gonella had taken from the radiocarbon sample before it was distributed for dating. Gonella reported that he excised the threads from the center of the radiocarbon sample.'

This can only mean besides Riggi's sample-taking for his own personal research purposes on April 21 1988 (see previous obituary), Gonella, as the man ultimately in charge of that day's proceedings, had been busy doing much the same. As already stressed in the case of Riggi, this is not to impugn either man's integrity and good faith. Nonetheless one can only wonder, how many more surprises of this kind may yet be in store?