

# An Engineer in Front of the Shroud

By Francesco Agnoli

August 22, 2021

Alessandro Paolo Bramanti graduated in electronic engineering from the University of Pavia, where he also obtained a PhD, and in physics of matter from the University of Salento. He is a researcher for an electronics multinational in the field of nanotechnologies, and is the author of numerous publications in international journals and the inventor or co-inventor of international patents.

He wrote Holy Shroud. A mystery between science and faith (Taranto, 2010).

- The miracle that Christianity cannot do without is above all one: the resurrection of Christ. And, coincidentally, it is precisely of this miracle that there is what many consider a proof: the Shroud. What is a miracle for you? And why does the Shroud appear to so many scientists today a miracle?

“The miracle is an exception to the laws of nature; and since the whole material world must submit to natural laws without the possibility of suspending or modifying them, the miracle can only come from a superior intervention, that is, directly from the Author of the natural laws themselves. To deny the absolute possibility of suspending the laws means, ultimately, to deny the existence of the Legislator; and this position, besides being very narrow and limiting, certainly cannot be supported with scientific arguments.

Science is like an explorer free to move in a country - that of natural laws - which is vast, but not infinite, and is surrounded by a wall that he, alone, cannot climb over. But if the explorer, due to this inability of his, said that there is nothing beyond the wall, he would behave unreasonably and, ultimately, a bit ridiculous.

Let us now consider the Shroud. It is a material object and, as such, undoubtedly obeys natural laws - including those of aging and sensitivity to heat, as we unfortunately see from the yellowing of linen and the burns from fires that have threatened it over the centuries.

Yet it also bears the mark of an external intervention; something that does not come from matter, even if it has left a deep trace in matter itself. That bloody double image is inexplicable in the light of any known physical phenomenon.

A lifeless body - and the one "photographed" on the Shroud is undoubtedly so, because it shows the signs of rigor mortis, thus excluding that it is a case of coma or apparent death; it is better to specify it since someone has even gone so far as to hypothesize like this in order to exclude death and therefore the Resurrection - a lifeless body, I said, cannot leave footprints even vaguely similar to that. And in general, there is nothing comparable in nature.

For this, many scientists honestly admit the inexplicability of the Shroud.

While others, who also deny it in words, do not miss an opportunity - especially a few months after the expositions - to announce, with drum rolls and fanfare that they have managed to reproduce it and, therefore, have shown that it is a fake.

And if up to now every attempt at imitation of the Sheet has proved to be a sensational fiasco, even if only on a superficial analysis, it is nevertheless very interesting to observe the persistence of these

skeptics. They mock the credulity of those who believe the Shroud to be authentic, but then they waste so much time and resources trying to make an identical one, just to prove that it is false! It would seem that deep down they are consumed by a doubt.

- Let's go into more detail. The Shroud seen by the electronic engineer.

"Let's start with a simple consideration. If the Shroud is not authentic it must obviously be an artifact made by a very skilled forger wishing to enrich himself with the trade in fake relics. And this, of course, is precisely the theory of those who deny the authenticity of the Shroud: an elusive medieval relic maker, who remained anonymous for obvious reasons, would have forged the object in his own workshop to then sell it, perhaps together with many others, in a sort of black market for the sacred, passing it off as authentic. Such a person probably would have considered the Shroud his masterpiece, the crowning glory of his career as a sacrilegious mystifier!

Now, the engineer is a sort of specialized inventor: his attitude is that of one who designs and builds, exploiting natural laws to his advantage. In front of the Shroud, therefore, he tries to identify himself with the forger, imagining what ingenious manufacturing method he could have devised to impress the image of the great Crucifix on the linen. And the electronic engineer in particular, being linked to the world of the microscopic and nanoscopic - that is, phenomena that affect matter at scales ranging from a millionth down to a billionth of a meter - is particularly inclined to ignite with curiosity. Because the Shroud image is caused by a fine modification in the structure of the textile fibers. But with what tool, the engineer asks, and by exploiting which physical phenomena, can such a modification be made?

In the century that has now abundantly passed since the beginning of the scientific studies of the Shroud, the theoretical hypotheses and experimental attempts to explain and, possibly, reproduce the Shroud, have been very numerous: but none have given satisfactory results.

The experiment with heat failed, in which an attempt was made to impress a cloth with a heated metal bas-relief, because the image that was produced penetrated the linen much more deeply than that of the Shroud - which instead is very superficial: only the outer cell shell of the outermost fibril is affected.

Of the use of dyes, wet or dry, not even to talk about it: it is ascertained that among the linen fibers there are no pigments and no traces of "brushstrokes", not even microscopic. It wasn't a hand that drew the picture.

The recent experiments with the laser are very interesting: the ultraviolet light pulses have modified the structure of some tiny samples of linen, producing a color apparently similar to that of the Shroud. But the differences from the original are still huge, as the authors of the research honestly acknowledge. Because the coloring is still too deep. And then it is too uniform, while in the Shroud it seems that someone with a microscopic vision has chosen point by point which fibrils to color and which not, and has obtained the chiaroscuro only by varying the percentage of colored and white from area to area. Another impressive feature, this one.

Not to mention that it would take a laser of unprecedented power to produce an image as large as that of the Shroud of Turin.

We add to all this that behind the blood stains of the Shroud the linen is not colored, as if the forger, with the skill of a Carthusian miniaturist and even more, had first deposited the blood and then colored the linen by carefully turning around each stain, instead to produce the image and subsequently stain it, as would be logical for an artificial object. Let's also add anatomical precision; the difficulty of producing an image that from less than a meter and a half away becomes practically invisible; the three-dimensionality; and various other subtleties.

Science gives up. The electronic engineer, with you.

One question remains. If with today's knowledge, making such a refined object seems so inconceivable, what chance would a medieval forger have?

- However, as some argue, we are not even capable of reproducing many artistic masterpieces of the past, and we do not therefore consider them miracles.

"Yes, but there is a profound difference. We know the physical nature of those works of art well: they are "simply" layers of colored substances laid on canvas, or "simply" broken, cut, forged stone blocks. The uniqueness of these works is artistic, not scientific. On the other hand, we don't really know the physical nature of the Shroud".

- The Shroud seen by the physicist?

"The physicist is looking for a scientific theory that can explain all the data. But in this case, as already mentioned, science is groping in the dark. At this point, there are two possible attitudes. The first. The physicist adopts the classic and now trite objection of the skeptics: in the future perhaps we will explain the existence of the Shroud in a scientific way. And we will find that perhaps it arose from a very unlikely - hence the uniqueness - but quite natural combination of various physical elements. Perhaps. A 'maybe' that in the minds of many skeptics becomes a convenient 'certainly', with which to delude themselves that they have liquidated the problem.

The second attitude. The physicist considers the data as a whole. And he realizes that the Shroud has been studied more than any other object in the world, by an impressive number of experts in the most disparate disciplines. And that all the data converge to say that it is the authentic Shroud of Christ - except, apparently, the famous carbon 14 dating, which however, as I have shown elsewhere, is nothing short of unreliable.

At this point, if the mind of the physicist is not enough, the mind of man must take over, whose capacity far surpasses pure and simple science. And you have to really consider all the data at stake.

The Man of the Shroud is the man with the most recognizable image in history: Jesus of Nazareth. That Man is the only one whose definitive resurrection from the dead has been announced for two thousand years now. And of resurrection, mind you, was not spoken about only after death. The announcement had been made before. So much so that that night, at the sepulcher, guards were mounted to prevent simulated resurrections.

The Shroud of Turin bears the imprint of that Man, an imprint that speaks of his death but also of a mysterious subtraction from death. It is the image of a corpse which, before becoming corrupted, disappeared, leaving an indelible trace. It is a physically unique image, as unique as that Man himself. If faced with this coincidence the mind *a priori* rejects even the possibility that the Shroud is a mute Witness of the Resurrection, it does so for a deliberate choice that has nothing to do with science.

This is not an unscientific thought. On the contrary, a physicist knows better than any other the limits of science. The wall. This is why he can be among the first to take the leap and go further".

*Source: News ProVita & Famiglia, n.95*