

More about the Verdict in the L'Aquila Earthquake Trial

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Last year I had the opportunity to publish a comment on the verdict of the trial about the missed warning for L'Aquila earthquake, which sentenced seven people (six scientists and a politician) for manslaughter. The verdict was based on the lack of a correct and deep evaluation and analysis of the seismic risk, especially considering the situation at that time, when a high number of earth-quake shocks struck L'Aquila. As I wrote in my previous article [1], the defendants ap-pealed the sentence, but at the time I wrote that article, the appeal proceedings had not yet begun.

This second trial concluded in February 2015. And since its verdict has almost completely confuted that of the first trial, I am briefly commenting on it here, in hopes that *I&M Magazine* readers are still interested in the motivation of the legal proceedings that involve scientists whose only fault is that of expressing their opinion on the basis of the available scientific knowledge.

The new verdict states that six of the defendants are not guilty and only one, the Vice Chair of the National Civil Defense Agency (Mr. De Bernardinis, the only politician among the seven defendants), has been sentenced for negligence because of his reassuring comments in informing the population about the risk of a new earthquake. The steps followed by the Court of Appeal of L'Aquila to come to a new conclusion of the proceedings are summarized here:

1. The defendants were not all official members of the Italian National Committee for the Forecast and Prevention of Serious Risks (Serious Risk Committee or SRC). Let me briefly remind readers here that the SRC has the specific task of supporting the National Civil Defense Agency in predicting and preventing calamities [1].
2. The defendants were not assigned the task to predict earthquakes but only to analyze and evaluate the ongoing situation.
3. They were not assigned the task to inform or reassure the population about the risk (or the absence of risk) of a new, much stronger earthquake than the seismic sequence of the previous months.

4. They did not announce any official information, and they did not release any details about the content of the meeting in which they took part on March 31, 2009.
5. Only Mr. De Bernardinis gave reassuring information to the population, based on incorrect scientific basis and wrong statements that were used in an improper way, thus persuading the population that a new, major earthquake was not expected.

At first, the Court of Appeal, considering the role of the defendants during the meeting hold in L'Aquila on March 31, 2009, stated that the defendants could not be assigned the same duties established by the law [1] for the official members of the SRC, because they had been invited as external technical and scientific experts. Although some of the defendants were official members of SRC appointed by the government (Mr. Barberi, Mr. Boschi, Mr. Calvi and Mr. Eva), all six scientists were asked to take part in the meeting as reputed scientists and provide their competent opinion based on their experience with earthquakes.

Starting from this assumption, the Court recognized that the only task assigned to the defendants was the one mentioned by the letter that convened the meeting: "*to deeply analyze the scientific aspects and related elements of civil protection concerning earthquake shocks occurred in the last 4 months in Abruzzo and in L'Aquila County.*" This conflicts with the scope identified by the first judge who (wrongly) considered that the defendants were assigned the task to evaluate the situation in order to inform the population.

Therefore, the first judge based his decision on these wrong bases, which determined, consequently, the liability of the defendants. He assumed that they were guilty because they did not show enough diligence and competence in managing the situation, which required, from the point of view of the first judge, better attention and a deeper analysis that should have been suggested by a more diligent methodology. The key point is "the adopted method", not the conclusions reached or expressed by the scientists. The first judge, aiming at demonstrating the responsibilities of the defendants, disputed the method applied by the accused scientists and affirmed that this method was not careful and functional enough; however, the Court of Appeal considered the merit of the conclusions reached by the scientists and evaluated

them to establish if their assessments could be considered valid.

After a long debate, the Court stated that the conclusions drawn and expressed by the defendants during the March 31st meeting were correct and scientifically sound, so they could not be prosecuted for negligence as the first judge had done. Furthermore, the Court of Appeal ascertained that there was no relationship between the opinions expressed by the scientists and the behavior of the victims of the earthquake of April 6, 2009 in L'Aquila. Indeed, the opinions expressed by the scientists during that meeting were not made public through direct interviews or declarations to the media, and journalists or local politicians inferred them without making specific reference to any of the defendants. Therefore, the Court of Appeal has confuted the conclusions of the first judge who considered all of the scientists liable for the news released about the meeting's outcome.

Taking into account all of these elements, and in particular:

- ▶ the diligence shown by the scientists, especially considering that the available scientific knowledge does not allow a reliable prediction of earthquakes,
- ▶ the absence of specific duties to inform the population, as well as
- ▶ the absence of interviews released by the defendants,

the Court of Appeal resolved to acquit all of the scientists. The only defendant for whom the original verdict of guilt was confirmed was the Vice Chair of the National Civil Defense Agency (Mr. De Bernardinis), who was considered responsible for negligent information, since he announced that other major and relevant earthquake shocks were not to be expected. His declarations were considered based on an incorrect assumption that was not supported by any scientific basis, and not by the advice provided by the scientists.

I hope that these short notes reassured all readers who have been concerned about the first verdict that appeared to act against science, rather than individuals, without objective evidence. Luckily, the Court of Appeal has confuted

the reasoning that led to the previous verdict and has reassured the scientific community that nobody can be considered guilty for expressing a pondered opinion based on the available scientific evidence. However, this verdict is not final yet. At the end of March 2015, the general attorney appealed against this verdict to the Italian Supreme Court. I will keep you posted, to let you know of interesting developments in this legal event.

Reference

- [1] V. Scotti, "The sentence in the L'Aquila earthquake trial," *IEEE Instrum. Meas. Mag.*, vol.17, no.2, pp.41-45, Apr. 2014.