

Nikola Tesla and studies on x-rays: rereading a nearly erased story

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When one looks at books of modern physics, the discovery of the x-rays is attributed to the scientist Wilhelm Conrad Roentgen (1845-1923) in 1895. However, the way these books deal with this discovery conveys the idea that, first Roentgen alone was responsible for it, as well as for the development of its applications and second, that this discovery was due to chance, thus not only minimizing the work by Roentgen, but also by other scientists involved in this kind of research, as is the case, among others, of Nikola Tesla (1856-1943), whose research in this field is the subject of the present study. Descriptions of the just mentioned kind reflect an erroneous view of the research process itself and of scientific discovery. Here I argue that it is important to rethink this kind of myths.

Experimental research might have some contribution of chance, however, even this contribution will go unnoticed if the scientist's focus is not directed toward a particular objective. But in its largest part, experimental research is systematic, rational work, driven by theoretical assumptions and that requires from the scientist great technical ingenuity to overcome observational difficulties and test hypotheses.

The present dissertation focuses on the discovery and later progression of the applications of the x-rays, with emphasis on Tesla's contributions. I analyzed the process of discovery of radiation, as well as the equipment developed by Tesla for this purpose. I particularly focused on how the discovery occurred, its communication to and reception by the scientific community and the general public. In addition, I discuss how the x-rays were used to photograph the interior of the human body, as well as the risks associated with their inconsequential use.

Thus the present study expects to contribute to the studies on Nikola Tesla and his work, through a critical evaluation of it and reframing of Tesla's involvement with the esoteric, with which he has been so commonly associated.

Keywords

History of radiology; Nikola Tesla; X-rays; Radiation

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