

## Review

# History, science and society Research on science in Italy in the modern and contemporary world

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The digitalization process of historical archives, which has been taking place over the past few years, shows that the study of history of science is undergoing major changes. Easier access to online resources (manuscripts, catalogues of scientific machinery and tools that would otherwise be virtually impossible to consult) has spurred and created the preconditions for the development of new quantitative methodologies in the study of history of science as well as the creation of international research groups.

Within this context – where Italian research in history of science has not caught on yet – the International Centre for History of Universities and Science (CIS) of the University of Bologna plays a crucial role.

The aim of the present study is to outline the results of research projects carried out at CIS, where the potentials offered by new technologies and by a quantitative approach were used in terms of scientific production, number of human resources, quality of students, professors and administrative staff, who have always been an integral part of any academic apparatus. Despite belonging to the research sector dealing with the relation between science and society, the articles included in the present collection – which can be considered an institutional publication – are independent and unrelated to each other.

The reading of quantitative historical studies may be difficult or considered for experts only. Nevertheless, the issues analysed in this short collection of essays mirror the topicality of questions dealt with in the past.

Marco Bresadola's essay is a perfect example: through an analytical and quantitative study of medical consultations of the 15<sup>th</sup>-century doctor Marcello Malpighi, he has analyzed the relationship between doctors and patients. In so doing, he has not only provided more detailed information about diseases and treatments existing at the time, but he has also contributed to understanding what communication strategies Malpighi applied to promote his image and thus reinforce his social role.

The problem of accepting data that can be scientifically obtained is undoubtedly a crucial issue in the history of science and has affected all disciplines. How scientific controversies were faced in the mid 18<sup>th</sup> century, how experimental results were certified and what role academic diplomacy and specialised publishing had in settling disputes (as explored in Raffaella Seligardi's essay) are the topics Paola Bertucci analysed in her case study on the controversy over the "medicated tubes" invented by Italian erudite Gianfrancesco Pivati, which were said to allow medication through respiratory tract by means of electric shocks.

Legislation and the attitude of academic institutions towards patents, intellectual property and technology transfer of inventions is another controversial subject dealt with in several studies analysing the relation existing between science and society, as in Christian Carletti's and Anna Guagnini's essays. Carletti focused on the experience of mechanical engineer Bartolomeo Avesani (late 18<sup>th</sup> century), while Guagnini analysed Guglielmo Marconi's situation a century later. In both cases a new technological device was launched, but the different historical, political and economic contexts and the importance of the inventions themselves led the two scholars to adopt two completely different strategies, whose stages have been punctiliously reconstructed.

The topical issue relating to intelligent design – recently discussed in the media – has highlighted the unusual marriage between science and religion. Within this context, the study by Massimo Mazzotti – exploring research in astrophysics and meteorology in Papal Rome – is worth considering. According to Mazzotti, research in those fields can be ascribed to a policy of territorial control and to the “cultural battle” of the Roman Government against atheism and materialism.

The last interesting essay included in the present collection is a gender study by Paola Govoni, the collection editor. Govoni analyzed a period spanning from 1877 – when the first woman received a degree – to 2005. Govoni focused on the relation between women and scientific education and interpreted data coming from different social and political contexts. She also explored the public perception of science and how it can influence individual education choices.

Each article deals with contextualised scenarios (in terms of both space and time) leading to a further consideration: in order to carry out a research project considering the complex connections between science and society, the context where scholars work cannot be disregarded. For this reason, a detailed description is included of both the environment and the personal and professional relations forming the framework of historical and scientific information. The opportunity thus arises to get inspiration to write more popular works.

*Translated by Silvia Agostini*

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