



the Pontifical Academy of Sciences

The 400th Anniversary of the Foundation of the Pontifical Academy of Sciences 1603-2003



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The meaning of the Pontifical Academy of Sciences – The four hundredth anniversary of the creation of the Accademia dei Lincei offers the occasion to reflect on the meaning and aims of our Academy. The Lincei Academy of Federico Cesi was conceived as a community of scholars who could together engage in the study of nature. Among their more notable productions, the *Tesoro Messicano*, an encyclopedic study of the variety of new species which the new world revealed the first systematic use of a microscope to uncover the marvelous structure of insects, and the first attempt toward a systematic classification of living beings. Many of these efforts remained unfinished with the death of Cesi. Had it not been for Galilei the Accademia dei Lincei would be remembered as an episode in the history of science, an early example of a research team more than the precursor of present-day Academies. Galilei made the difference, and projected the Academy in directions which prefigured the role of modern Academies as centers for the promotion of scientific culture and the discussion and evaluation of its progress. Galilei helped his younger colleagues in many ways, both with his personal prestige and in providing them with some of the most advanced tools of the times, such as the microscope. In turn the Academy took upon itself the task of publishing his work and promoting its diffusion in the scientific world and beyond. In moving to the court of Florence, Galilei requested the title of the Grand Duke's Philosopher, not that, at the time more usual, of Mathematician, which was Kepler's title at the imperial court in Prague. Galilei thus insisted that Science belongs to the highest reaches of human culture, those which engage in the search for Truth and in studying the means by which Truth can be approached, briefly: to philosophy. In searching for truth, experimental tools as the telescope or the microscope and the theoretical tools offered by mathematics are as essential as the syllogism, experiment and the patient observation of nature, as essential as the more abstract modes of the philosophical discourse. These ideas fully resonated with those of the young prince Cesi and became the distinguishing trait of the Lincei. In 1847 Pius IX adopted the Lincei Academy as an official institution of the Pontifical State, the Pontifical Academy of the New Lincei. The Academy was assigned eminently practical tasks: that of furthering the progress of science and of becoming a center of expertise to cater for the needs of the Pontifical States in the improvement of their technical infrastructure. ... When the Pontifical States were incorporated in the Italian kingdom, the Pontifical Academy of the New Lincei continued its activities of study and publication. With the taking of Rome in 1870, a branch of the Lincei was reestablished as an Italian Academy, the present Accademia dei Lincei ... In 1923 Pius XI assigned to the Nuovi Lincei its present seat, the Casina Pio IV, a magnificent renaissance building that the recent restoration has brought back to its pristine splendor. This was the first tangible sign of a revival of the Academy, but the turning point came with the *Motu Proprio In Multis Solaciis* by Pius XI, issued on 28th October 1936, which provided for the transformation of the Academy of the New Lincei into the present Pontifical Academy of Sciences. This was not a simple change of names: the Academy was given a new membership ... and was assigned a lofty task, that of becoming the Scientific Senate of the Catholic Church. ... The restored Academy would establish, at the highest possible level, an open channel of communication between the Catholic Church and the scientific community. The Academy is under the direct protection of the ruling Pope but it enjoys remarkable freedom in establishing its agenda and organizing its activities. ... The Academy operates through Plenary Sessions, working groups and study weeks. The Plenary Sessions, normally held every second year, are attended by the

full academic body, and are the occasion of interdisciplinary discussions on the progress of science and of its philosophical and cultural meaning. It is in the Plenary Sessions that the interdisciplinary and truly international nature of the Academy fully shines, this was indeed a feature of the original Cesi Academy. ... Working groups and study weeks are specialized meetings devoted to particular scientific problems, with the participation of academicians who have an interest in the theme and of other scientists which contribute their specialized expertise. ... A large portion of our activity is devoted to discussions on the impact that, in different ways, science can have on the human condition. On this subject it is important to recall that the rapid advance of scientific knowledge and technical capabilities poses a problem of justice and equity. Most scientific knowledge is produced in the rich countries, and it is these countries which mainly enjoy the fruits of the new technologies. The gulf between the rich and the poor widens, and the poor become more and more dependent on the rich for their basic necessities. ... I would like to conclude by thanking all the Academicians who have greatly contributed to the success of the Academy in its special task, giving freely their wisdom and their precious time to organize excellent meetings and to further its many activities. The advent of the digital age has greatly facilitated the knitting together of an academic community scattered in so many countries in different continents, improving the way we operate. I hope Federico Cesi would appreciate the work of this distant descendant of his great institution. We probably have not yet produced anything comparable to his *Tesoro Messicano* or to Galilei's *Saggiatore*, but we have tried to do our best and will keep on trying!

Nicola Cabibbo