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Reports

VIII Convegno Nazionale di Storia e Fondamenti della Chimica

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*by Marco Ciardi**

The *Gruppo Nazionale di Storia e Fondamenti della Chimica* was formed in 1986 [http://www.filosofia.unibo.it/gnfsc/Gnfsc.htm]. One year prior to its formal establishment, the Group organized its first congress (Turin, 1985). Since then, the congress has been held every two years: Rome (1987), Cosenza (1989), Venice (1991), Perugia (1993), Cagliari (1995), L'Aquila (1997), and now Arezzo (1999).

The principal aims of the Group are to provide a collective identity for Italian historians and philosophers of chemistry, to encourage the encounter between scholars of humanistic and scientific training, and to bring a more general public (amateurs, teachers, *etc.*) and the world of the specialists closer together. For this reason, as on previous occasions, the lectures presented at the Arezzo congress were notable not only for their content and form, but also for their broad objectives. By no means should the generality of these aims be regarded as a limit. On the contrary, it represents a considerable resource for a discipline like chemistry, which is, after all, characterized by an incredible number of philosophical and historical traditions.

The first session was opened by Antonio García Belmar, with a paper produced jointly with José Ramón Bertomeu Sánchez, and entitled *The teaching of chemistry: practices, methods and didactical instruments*. This paper presented a study of the teaching of chemistry in France at the end of the 18th, and during the first half of the 19th centuries, and drew principally upon the chemistry text books published during this period and upon the teaching of chemistry in specific institutions, such as the Collège de France. It also offered an occasion for a more general reflection: namely, that historians of science should consider the contents of chemistry as it was taught from a perspective similar to that adopted when analyzing research-derived chemistry, and, moreover, that they should give weight to the practices, the methods and the didactic instruments associated with the teaching of this discipline.

Paola Carusi (*The Snail of Aristotle. A probable small passage from philosophy to alchemical allegory*) then opened a group of papers dedicated to the subject of alchemy. Carusi pointed out how, in the present state of research, the difficulties encountered in interpreting allegorical Arabic alchemical treatises from the 9th and 10th centuries seem to stem, above all, from a problem of sources. Many passages that at first appear absolutely inexplicable can, in fact, be efficiently interpreted if one identifies the philosophical and literary texts that the author used, and which he freely adapted to his treatise.

Manola Carli examined the *Liber Compostille*, which Bonaventura da Iseo, an Italian Franciscan friar, wrote in the seventh decade

of the 13th century. The *Liber Compostille* was an alchemical encyclopedia, which represented an attempt to draw together all available knowledge of practical alchemy, as well as to attune the ideas of Albert the Great to those of Roger Bacon with respect to the generation of metals and alchemical transmutation. The *Liber Compostille* was also at the center of Michela Pereira's presentation. Pereira drew attention to the presence of a large section in the encyclopedia on alchemical and medical distilled waters, which thus links Bonaventura da Iseo to the tradition of distilled waters that flourished after the middle of the 13th century, and makes his treatise an early testimony to the new orientation of alchemical research towards pharmacology, commended by Roger Bacon.

The 'alchemical session' was concluded with a contribution from Ulrich Neumann (also on behalf of Karin Figala), entitled *Michael Maier on Rosicrucianism: the Portrayal of a Virtual Secret Scientific Society*. The publication of the two so-called manifestos of the Brotherhood of Rosy Cross in 1614 and 1615 respectively would prove to have quite remarkable repercussions. For the remaining years of the decade, the thought of the secret knowledge that this occult fraternity claimed to possess haunted many European scholars, provoking a yet unquantified flood of booklets and treatises. Maier was one of the participants in this debate, and defended the role of alchemy as practical knowledge.

The second day was opened by Domenico Priori (also on behalf of Cristoforo Albertini and Emidio Santoni), who considered Francesco Maria Vannozzi's treatise *De Aqua Minerali*. In this treatise, published in Rome in 1642, the author concentrated his attention on the famous mineral water known as *Salmacina*. This was followed by a paper from Virgilio Giormani, who discussed the use of fossil coal in Venice in the 18th century.

A group of papers was dedicated to the Lavoisian revolution and its theoretical, philosophical, cultural and political impact. Raffaella Seligardi (*Alessandro Volta and the new chemistry*) dealt with Volta's chemistry activity in the years between the discovery of the composed nature of water and the development of the battery. Marco Beretta (*Lavoisier's laboratory*) illustrated, on the basis of unpublished and hitherto unknown documents, the principal aspects of Lavoisier's laboratory and pointed out its innovative features. Ferdinando Abbri (*Chemistry and Music: Lavoisier's unpublished 'Notes sur la Musique'*) considered the impact of 18th century music theory upon some phases of the chemical revolution and, in particular, how music theory had influenced Lavoisier in the period when he was engaged in creating a new image of chemistry. I (Marco Ciardi) analyzed the work of Joseph de Maistre, the famous Restoration philosopher (*Chemical Revolution and Restoration. Joseph de Maistre's 'Soirées de Saint-Petersbourg'*). De Maistre was a strong opponent of Lavoisier's chemical revolution, and revalued both the alchemical and hermetic traditions. The morning session was concluded by Paolo Bensi, who illustrated the results achieved by avant-garde artists thanks to the progress in chemistry, not only from a theoretical and conceptual point of view, but also from a practical one.

In the afternoon, Angelo Bassani discussed the role of Venetian industrial awards, introduced by the French in 1806 and continued by the Austrian government until 1858, as an incentive to economic growth. Nicoletta Nicolini reconstructed the institutional history of chemistry in Rome, from the establishment of the first chair in 1748 to the birth of the Kingdom of Italy. Emilio Mario Castellucci and Patrizia Papini presented the cultural and scientific undertakings of Ugo Schiff, the father of academic chemistry in Florence. Marco Fontani (also on behalf of Maria Grazia Costa and Paolo Manzelli) examined the contribution of Italian scientists to the endeavor to identify the missing elements required to complete the periodic table. Matteo Leone and Nadia Robotti presented a comparative analysis of the research carried out by William Crookes and Norman Lockyer with reference to their work on the meaning of atom complexity and dissociability.

The final day of the conference was opened by Luigi Cerruti's paper entitled *Free Electrons, 1900-1940*. Cerruti presented a new interpretation of the origin and development of physical organic chemistry, and made a plea for greater attention to be given to the history of science in the 20th century.

A special part of the session was dedicated to the centenary of the birth of Giovanni Battista Bonino (1899–1985), the founder of molecular physical chemistry in Italy. In his presentation, Vittorio Carassiti summarized Bonino's scientific work, with special reference to his interest in infrared molecular spectroscopy. Andreas Karachalios chose instead to emphasize Bonino's role in the formation and strengthening of scientific relations between Italian fascists and German National Socialists after the Rome-Berlin axis of 1936.

Finally, Franco Calascibetta (also on behalf of Antonio Clericuzio and Cristina Padovani) analyzed the Italian contributions to the 10th International Chemical Congress held in Rome in 1938 along with some aspects of basic and applied Italian chemistry research in the years before the World War II, while Paolo Maltese presented his considerations on the industrial production of synthetic rubber after the Japanese occupation of territories in the Far East in December 1941.

The proceedings of the conference are now published in *Atti dell'VIII Convegno Nazionale di Storia e Fondamenti della Chimica*, edited by Ferdinando Abbri and Marco Ciardi, Roma, Accademia Nazionale delle Scienze detta dei XL, 1999, 346 pp. This volume and the proceedings of the former conferences are available for free; sample copy requests should be addressed to Dr. Antonella Grandolini, Accademia Nazionale delle Scienze detta dei XL, Via Cassia Antica, 35 (Villa Lontana), 00191 Roma, Italy (acc.scienze@flashnet.it).

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