In the Shadow of the Court: The Birth and Development of Turin Academy of Sciences

In 1757, the mathematician Joseph-Louis Lagrange, the physician Gianfrancesco Cigna, and the chemist Angelo Saluzzo, founded a Società Privata Torinese in Turin, the nucleus of Turin Academy of Sciences, with the encyclopaedic aim of broadening studies on mathematics and natural sciences. From the time it was created, this Society was one of the most dynamic cultural centres of Piedmont, recently animated by the Enlightenment. Its members met weekly in Saluzzo’s home, to discuss their research and share readings and news selected from learned journals and various correspondences. In 1759, just two years after its foundation, the Society published a volume of Miscellanea philosophico-mathematica. Pleased with the success of this first editorial enterprise, the founders dedicated an Ébauche de projet pour l’établissement d’une Académie royale des sciences à Turin to Prince Vittorio Amedeo III (1760). The moment was...
propitious: Turin was experiencing a cultural renaissance of sorts, with the restyling of the University\(^4\) and the ascent to the throne of Vittorio Amedeo III\(^5\). Lagrange, Cigna, and Saluzzo asked the Prince to sponsor a project that would be advantageous for the improvement of the sciences in Piedmont. As a result, Turin Academy entered into a close relationship with the Savoyard Court, that would be maintained throughout the first period of its existence\(^6\). Lagrange, Saluzzo, and Cigna’s request to the Prince was partially satisfied and the Società Privata Torinese was granted the honorary title of Royal. In 1783, the international reputation of the Society was sanctioned by the Savoyard court and was granted the title of Accademia Reale delle Scienze\(^1\). The court presented the new Academy with an endowment of 12,000 lire, two thirds of which were destined for the publication of the academic Mémoires and the purchase of books\(^8\).

The transformation of the Royal Scientific Society into a structured Academy required a new set of Regulations, which was drawn in 1783\(^9\). The Secretariat had the responsibility of making public the activities of the Academy and undertook the task of keeping the Academy informed about cultural activities in Italy and abroad through the help of its members, while Turin Academy willingly acted as an intermediary for the diffusion of experiments, inventions, and technical knowledge, and demonstrated its appreciation for technicians who had spent a trial period abroad by hiring them to run its laboratory and the observatory\(^10\).

\(^4\) From the 1770s, the Turin Academy influenced the cultural development of mathematics and sciences, while at the University a certain conformity persisted. Cf. Patrizia Delpiano, “Il museo di docente nel Piemonte del Settecento,” Quaderni di Storia dell’Università di Torino, 1, 1, 1996, pp. 133-155, and id., Il trono e la cattedra. Istruzione e formazione dell’élite nel Piemonte del Settecento, Torino, Deputazione Subalpina di Storia Patria, 1997.

\(^5\) Vittorio Amedeo’s predilection for scientific studies is well known. Moreover, the Prince’s Preceptor, Marquis de Fleury, was an influential middleman between the Court and the developing Academy. Signs of cultural openness towards scientific knowledge had also been demonstrated by Carlo Emanuele III. For example, he asked Jean-Antoine Nollet and then G. Beccaria to deliver a Physics’ course to his sons and the noblemen of Turin. Cf. Paola Bertucci, Viaggio nel paese delle meraviglie: Scienza e curiosità ne/I “Italia del Settecento,” Cinisello Balsamo (MI), Silviana ed., 2009, pp. 95-111.

\(^6\) The link between political power and scientific life in Piedmont during the Enlightenment is illustrated in Giuseppe Gairotto, “Le istituzioni culturali piemontesi nella realtà Europea del ’700” and Marco Cerutti, “Intelllettuali e potere nel Piemonte napoleonico” in Proceedings, pp. 23-36; 121-133.


\(^8\) Regio Biglietto, col quale si assegna alla Reale Accademia delle Scienze, e sono approvati gli annunzi Regolamento ed Elenco de’ suoi Membri, in Manno, Il primo secolo, p. 32.


\(^10\) Cf. Manno, III, 1, 16, pp. 242-243: “[...] because the young manufacturer of mathematical instruments Carlo Roger of Verelengo has been back from London, where he followed a proficient apprenticeship, working for two years under the direction of the celebrated Ramsden, it would be useful for the improvement of his own country’s sciences and arts and for the Academy’s demand of the construction of physical and astronomical equipments, that he should be appointed in Turin and that he should be provided with the necessary tools and with a small laboratory.”

It is undeniable that the best account of the Academy’s activities and, at the same time, its faithful depiction, was due to the publication of the following series: the Miscellanea (1759), the Mélanges (1760-1773), and the Mémoires (1784-). As the publishing hub of an academic institution, every aspect of the editorial process was strictly controlled by the Regulations\(^11\), although some features changed in the course of time or were repeatedly discussed in the sessions. The printing was entrusted to the printer and bookseller Gian Michele Briosi. In the 19th century it would be handled by Loescher Publishing Company, and the volumes were then printed by the typographer Paravia. The publication of such ambitious volumes (in quarto format, over three hundreds of pages for each one, with tables, diagrams, drawings, and engraved decorations) required remarkable financial funding, but the production costs were almost entirely supported by endowments granted from the Savoys. The activities of editorship as well as the supervision of its technical aspects were shoulderered by the editor-in-chief (Direttore della Stampa delle opere accademiche e delle corrispondenze), Giuseppe Maria Boccardi, appointed in 1783, whose role was permanent. Every year he negotiated the economic terms of the contract with the printers\(^12\). Boccardi was also responsible for the preservation of manuscripts and drafts, he checked their correct typographical reproduction, fixed the terms of payment after the printing of the volumes, supervised the delivery of the issues and their layaway plan\(^13\).

At the beginning of each year, the President was required to draw the schedule of activities. Each member had to indicate his intention to present a work for publication in the next issue, and to specify the topic\(^14\). A deadline date was never specified and an academician could decide to postpone or renounce the submission. For instance, according to the report inserted in the Lettres Patentes of 1760, Luigi F. Arnulfi, Giuseppe A. Bruni, Vittorio F. Molinieri, Michele A. Plazza, and Ludovico Richieri had promised to publish essays in the second volume of Mélanges, but only Richieri’s paper appeared, as the other four withdrew their original proposals\(^15\). All the writings presented for publication had to be read in the next session by the author in person, or by a resident member. The memora were read according to the seniority of the relevant promoters and the Academy members could decide to interrupt the reading of writings on mathematics and physics in order to request more time to examine the work in further detail\(^16\).

\(^11\) Lettre-patent ... , Regolamento, Manno, Il primo secolo, Art. 5, 6, 7, 8, p. 16; Art. 9, 11, pp. 16-17; Art. 21, p. 18.

\(^12\) Cf. Minutes, III, 1, 15, pp. 15 ; 310 and Minutes, III, 1, 16, p. 259.

\(^13\) Cf. Lettere-patent ..., Regolamento, Manno, Il primo secolo, Art. 2, p. 16; Art. 35, p. 19 and Minutes, III, 1, 12, pp. 6; 79.

\(^14\) Lettre-patent ..., Regolamento, Art. 5, 6, Manno, ibid., p. 16.

\(^15\) Cf. Manno, ibid., p. 12.

\(^16\) Cf. Minutes, III, 1, 15, pp. 136 ; 245.
The memoirs could be inserted in the issue without specifying the date of the submission. Editing procedures of the articles were not particularly efficient, as can be observed from the memoirs where the date is specified. Moreover, the publication of the volumes was irregular, particularly in the early periods. For example, following the publication of the Miscellanea (1759) and the first volume of Mélanges (1761), the second volume of Mélanges took five years and eventually appeared in 1766; the next issue was published in 1769 after some delay due to Lagrange’s transfer to Berlin. In 1767, Leonhard Euler was awaiting the publication of this issue, as he said in a letter to Lagrange:

"J'attends avec la dernière impatience le troisième Volume des Mémoires de l'Académie de Turin, que je crains beaucoup qu'il ne soit le dernier, tant à cause de votre absence, que parce que M. r Cigna est aussi disposé de quitter."

As Euler had predicted, the publication of Mélanges stopped in 1773 and began again ten years later. During this time, the activities of the Society were interrupted. As a result of the honorary title of Royal Academy, in 1784 the new series of the Mémoires was inaugurated and, by 1792, five volumes of the series had been published. This was followed by another disruption in the publication, due to the French Revolution. Publishing was resumed in 1801, after the restoration of the Savoys, and would continue until the present day with issues generally appearing on an annual basis.

One of the questions most frequently discussed in the academic sessions concerned the language of publication. In 1783, the Academy established that the academic publications could include papers in Latin, French, and Italian, while the handwritten minutes had to be written in Latin. This last regulation was the subject of lively discussion and the final regulation determined that the Secretary could choose to edit in French both the "Avant-propos historique" and any official documents. In the Miscellanea and the Mélanges, 82 memoirs appeared, amongst which 30 papers were written in Latin and 52 in French. In the Méno-

17. Cf. Minutes, III, 1, 15, pp. 2; 125; 135; 147; 183-184; 220-21. Between 1750 and 1786, the Academy decided to modify the order of its publications, anticipating or delaying the editing of a memoir according to the author's prestige.
19. Cf. Minutes, III, 1, 15, p. 2: "The Academy established unanimously that it will be possible to read and publish works written in Italian"; p. 44: "The language was discussed again by the Secretary of the Act and the Academy decided that the Secretary had to write them in Latin"; p. 82: "As suggested by the President, the Vice-President proposed a re-examination of the resolution of March, 7th, n° 7 and remarked that it was more suitable to publish the History and the Academy’s Acts in French. The Academy decided to leave this decision to the Secretary." Minutes, III, 1, 16, pp. 20-21: "The Secretary read a part of his Mémoire Storiale, written in French, which included the main academic activities for the four years 1786, 87, 88, 89, and which will be appended at the beginning of the issue, which is currently in press".
21. Minutes, III, 1, 16, p. 299. The Battaglione Alpamonto Brempo di Torino was part of the Austro-Piemontese army.
23. Diagrams and drawings were presented and illustrated during the sessions. Cf. Minutes, III, 1, 15, pp. 147, 148; 216. Minutes, III, 1, 16, pp. 149, 151. A selection of these drawings was presented to the King of Sweden during his visit to Turin in 1784 (cf. Minutes, III, 1, 15, p. 73).
The Authors and the Contents

Analyzing the authors of Mélanges and Mémoires means analyzing the composition of the Academy, since these publications accepted only contributions from members. From the time of its inception, the cosmopolitan approach was one of the characteristic features of Turin Academy of Sciences: twelve foreign members were admitted into its ranks. The Academy membership was meant to include twenty Italians and twenty foreigners. On the year of its foundation, the Academy included French, German, Swiss, Russian, Danish, and American students, who were distributed in the different fields of research. Between 1797 and 1798, the diversity of nationalities represented in the Academy was further enriched by the membership of Swedish, Austrian, and English members. Thanks to a broad network of epistolary relationships by Joseph-Louis Lagrange, Angelo Saluzzo, Carlo Allioni, Carlo Lodovico Morozzo, amongst others, scientists of high standing at an international level, such as Jean le Rond d’Alembert, Jean-Antoine Condorcet, Leonhard Euler, Gaspard Monge, Pierre S. Laplace, Albrecht Haller, Antoine G. Monnet, Otto F. Müller, James Smith, Jacob Spielmann, and Johann J. Ferber, joined the Society. This marked the beginning of several fruitful collaborations and regular contributions for publication in the Academy’s series. From 1759 to 1800, the geographical origins of the authors can be outlined as follows: Italian members were 141, foreign members 43. No women are to be found among the authors.


25. In the first period, membership was a prerequisite in order to submit a work for publication. However, in the 19th and 20th centuries, the Academy also accepted works by non-members, if submitted by a resident member.

26. Projet de Lettres-Patentes, Art. 6 and Lettre-patente ..., Regolamento, Art. 1, Manno, Il primo secolo, pp. 10; 16. It is interesting to note that this international opening surpassed that of the Paris Academy. This influential aspect of the Academy remained substantially unchanged in time except for a downturn in 1797 when the number of foreign members decreased to fourteen.

27. Cf. “Prospetto dei membri dell'Accademia 1798”, Archives of AST, IV, 1, 95, c. nn.


29. Cf. Elenchi Accademici, Manno, Il primo secolo, pp. 189-198. In the Archives of the Turin Academy there is an address book (Elenco degli accademici dalla data della fondazione al 1787, Archives of AST, IV, 1, 94) that allows us to reconstruct the networks of international collaborations established between 1783 and 1798. On each page there is the name of one of the Academy’s resident members, including a list of foreign and national correspondents with whom he was in contact.

30. Cf. Bagliani, La corrispondenza, p. 124. In Allioni’s correspondence (pp. 89; 113; 199; 222), there were many other sources concerning the Academy’s life. For example, Gabriele Brunelli followed the transformation of the Royal Society in a structured Academy: Paul Guénon de Chevannes and Jean F. Séguier requested Allioni’s help in order to access to the Academy’s ranks, and Tommaso Verani congratulated Allioni for his appointment to the Academy’s treasury.

31. Cf. Minutes, III, 1, 15, p. 215. Cf. also Minutes, III, 1, 15, p. 284; Minutes, III, 1, 16, pp. 77; 178. These programs were alternatively read in the sessions by national academicians. For a brief catalogue of results, patents, observations, and experiments communicated to the Academy through its correspondent members rather than a detailed analysis, see Minutes, III, 1, 15, pp. 13-14; 78; 81; 104; 191; 277; 292; 308; 322; Minutes, III, 1, 16, pp. 6; 9; 45-50; 71; 86; 136; 156.

ics, Physics, and Natural Sciences were the only fields of research eligible for publication. Papers discussing religion, politics, and moral issues would not be accepted and any discipline involving "occasione di inciampo" (causes of difficulty) would be excluded. Notwithstanding the title Mélanges de philosophie et de mathématique, works in philosophy and metaphysics were rare and accepted if they were not rejected a priori. Moreover, all the members had to obtain specific approval in order to publish their works under the qualification of the Academy. The President or, if necessary, the Vice-president, was the only member who could practice an internal censorship: he had the responsibility of examining, approving or rejecting any memoir "with all the prudence that the honour of the Academy and the safety of the government required". However, such an activity is hardly recognisable in the evaluation of works discussing mathematics, natural sciences, medicine, engineering, and botany.

According to the editorial policy respected by the Academy, the volumes consisted of both articles and correspondence. Controversial articles were not allowed; neither were reviews, translations or abstracts of papers published elsewhere, announcements for books, eulogies or obituaries. In particular, the papers had to present original contents (public issues were favoured, according to the academic motto Veritas et Utilitas), which had to be defended and explained in extensive detail.

It is difficult to determine if the procedures of evaluation, or forms of inner censorship or ostracism, were directed against specific authors and/or scientific trends. On the contrary, a form of editorial guidance was clear and a few disciplines were systematically excluded as they were deemed not to be pertinent to the Academy works. This was the case for the works of practical medicine, oculistics, eye surgery, and meteorology. The examining board frequently refused the publication of contents that did not match editorial policies, for example if the work was considered too polemical or if it lacked originality. Memoirs concerning natural sciences, chemistry, and physics had to be supported by a set of observations, data, and experimental evidences, so that they would not be rejected for publication. In fact, there were several notorious instances of programmatic exclusion, as it happened in the field of chemistry, regarding Lavoisier’s theories.

It is not possible to examine the single contents of the academic issues concerning their variety and complexity, so we will trace a mere outline. Following the changes in the editorial board, the publication of mathematical works, which was predominant in Miscellanea and the Mélanges, declined both in number and in quality after 1786. As regards the other disciplines, the first systematic astronomical, climatic, and meteorological surveys were organized in the Academy specula by the members Ignazio Somis and Antonio M. Vassalli Eandi, and subsequently published as part of the academic series. In the field of botany, the Academy members played a central role at an international level thanks to Allioni and his pupils, who spread the new approach of Carl Linnaeus, applying his nomenclature to the flora of Savoy territories in the Mémoires. Cigna and Saluzzo’s research in chemistry, edited in the Mélanges and Mémoires, was praised in Italy and abroad and provided significant contributions to the combustion phenomena while Giovanni A. Giobert was one of the first Italian scholars who understood, accepted, and spread Lavoisier’s work in the academic issues.

Nicolis de Roblant’s Stuogi mineralogici e metallurgici marked the beginning of systematic exploration of the territory for metallurgy in Turin. Finally, the contribution of the Academy was essential for technological advancement also because

33. In the Minutes, III, 1, 15, p. 15: "About the question concerning what the Regimento intend under the name of Physics, the Academy deemed that Physics includes Anatomy, Physiology, Chemistry, Astronomy, Geography, Naval science, Agriculture and Natural History in their more ample meaning.

34. "Riflessioni intorno ai regolamenti accademici del signor conte di Saluzzo", Archives of AST, Fondo Originale.

35. With regards to botany, Bagliani (La corrispondenza, p. 4) writes: "... this new science, the Botany, did not worry and did not threaten the last season of the ancient régime. So Turin, with the figure of Carlo Allioni, could become the centre of a research movement that used the experimental method but, differently from other researchers – i.e. the abbot Spallanzani with his contamination of the theory of the spontaneous generation – did not hazard the truthfulness of the prevalent teaching.

36. Cf. Minutes, III, 1, 15, pp. 14-15; 45; 56-57; 93; 102; 116; 141; 150-151; 165-66; 185; 237; 290; 295; 297; 322; 323; Minutes, III, 1, 16, pp. 86; 189-190; 203-304; 207; 210.

37. Cf. Minutes, III, 1, 15, p. 15: 102: "After the reading of a memoir by the Doctor Marini from Savigniano about the use of olive oil in the treatment of the Arretrali vaghe, the Academy deemed that this paper was extremely interesting and praiseworthy but it could not be accepted in the academic publications because it concerned the mere applied medicine.


39. Cf. Minutes, III, 1, 15, p. 294: "Bonvicino read another report, drafted with Fontana, on a paper by Federà. The referees concluded that the memoir was commendable for the philosophical views there exposed but it could not be accepted for the publication without repeating the experiments and confirming their accuracy, the conclusions being opposite to those of more celebrated authors.


41. Cf. Minutes, III, 1, 15, p. 237: "The President read a memoir of our member De Moreau, entitled "Mémoire sur la saturation des sels". With 13 votes against 2 it was judged that this paper could be accepted for publication in the academic volumes, but with the warning that each term of the new chemical nomenclature which had been used there had to be placed side by side with the common synonymous that the President had already indicated. " Cf. also Minutes, III, 1, 15, p. 206.


43. Allioni applied, for the first time, the binomial nomenclature in his work, "Synopsis Methodica Stirpium Horum Turinensis", published in the Mélanges de Philosophie et de Mathématique, 1760-61, pp. 48-76.

of its prize-winning competitions: the awards were recorded in the academic series.

The ascent of Napoleon gave rise to a complete reform of the Academy. A new class of Literature and Fine Arts was created in 1800, membership increased, and the title of Accademia Nazionale was adopted44. All of these changes were evident in the publication of two volumes of Mémoires in 1802 and 1803, which included essays on history, geography, Eastern philology, and rhetoric.

The Transfer of Knowledge

From 1759, Turin Academy of Sciences expressly aimed at reaching a broader audience and a wider geographical circulation for its volumes. The Miscellanea was delivered to many scientists and institutions in Italy and abroad. These issues enjoyed a good success, as confirmed by the following remarks in the Lettres patentes by Vittorio Amedeo III:

"As soon as the virtuous Turin Society communicated to the public the first valuable essays of its activities, that spread everywhere the fame of its name, in a short time the most important European scholars felt honoured by entering this meritorious Society"45.

The Miscellanea was announced in the Nuovo Giornale de' Letterati d'Italia46 and a list of its contents was inserted in the Collection académique, where the Società Privata Torinese was praised because it seemed "animée de cet esprit philosophique qui ne marche qu'avec le flambeau de l'expérience"47. The positive reactions to the high scientific standards, the seriousness with which topics were addressed, and the impressive typographical layout are clearly emphasised in Euler's correspondence with Lagrange48. In autumn 1759, Lagrange thanked Euler for his "honorable jugement" of the Miscellanea and remarked upon his collaboration in this editorial enterprise with the eminent naturalist, Haller. Lagrange urged his Swiss colleague to propose his own works for publication in the following issue:

"Le succès de cette première entreprise nous encourage à ne pas l'abandonner, et nous espérons de donner au public un semblable volume au milieu de l'année prochaine. Nous avions d'ailleurs tout lieu de croire que...

47. Collection académique, composée des mémoires, actes, ou journaux des plus célèbres académies & sociétés littéraires étrangères ..., Tome treizième de la partie étrangère, contenant l'histoire & les Mémoires de la Société Royale des Sciences de Turin, Paris, 1779.

This advice did not go unheeded and Euler immediately sent his research on the propagation of sound in an elastic medium to the Turin Society49. In Italy, Lagrange gave resonance to the editorial activities of the Società Privata Torinese in his correspondence with the mathematician, Giulio Carlo Fagnani:

"Here in Turin has been created a sort of cultural society and it is now in press the first volume of Mémoires, that concern various philosophical and mathematical subjects. We hope that this volume could support the comparison with the issues that continuously are published by the Academies. I am afraid that there is no direct way to send the volume from here to Sinigaglia, but I suppose that it will be easy to obtain it from Venice or Bologna, where we intend to send many copies"51.

The circulation of Miscellanea and Mélanges and their reception can be assessed through the documents preserved in its Archives that allow us to analyse the initial size of the print run. Inside the Minutes of the Academy's sessions, there are a total of three tables outlining plans for the distribution of issues for the years 1784-85, 1786-87, and 1788-8952. This is clearly due to the fact that the editor-in-chief had to justify to the plenary assembly of academicians the economic details of the publication and, in particular, the cost of printing and delivery of the journal. These tables demonstrate that, from the publication of the first volume, the Academy scheduled the delivery of a significant number of volumes: 137 deliveries were planned, 18 of which were destined to foreign scholars. The volumes were meant to reach the Berlin Academy of Sciences, the Society of Philadelphia, and the London Society of Longitudes, amongst others. Between 1786 and 1787, the number of deliveries remained substantially unchanged; however, a copy was destined for the authors of the Giornale di Fisica. The academic series must have quickly developed a wide readership because the following year the Academy decided to increase the deliveries from 135 to 150 volumes. Eighteen volumes were once again destined for foreign scholars and a copy was addressed to the Boston Academy of Sciences. The Academy's members also

played an important role in the distribution of the issues; for example, Allioni satisfied the requests for academic volumes of his correspondents Philippe Lapeyrouse, David van Royen, and Giovanni A. Sangiorgio\textsuperscript{53}.

The promotion of Mélanges and Mémoires depended on the networks of correspondence within the institutions and with the editorial staff of other learned journals\textsuperscript{54}. In this context, it is meaningful that in 1791, Prospero Balbo was given the task of preparing the abstract of Turin academic publications for the Biblioteca Oltremontana\textsuperscript{55}. We also have evidence of the link between Turin Academy and the editorial committee of the Annali di Chimica. In the 13 May 1792 session, Armand Seguin, who was a correspondent member of Turin Academy and also worked as a secretary compiling the Annali di Chimica, wrote to the Academy with the following request:

"[...] to communicate him the scientific novelties in order to insert them in the above–mentioned journal; and in turn he offered to promptly participate the discoveries made in Paris\textsuperscript{56}.

During the same session, the Academy assigned to Giovanni A. Giobert – who exchanged letters with Seguin who had often published on the Annali di Chimica – the task of conveying this information.

The King of Sweden’s visit to Turin also provided an opportunity to advertise the cultural activities of the Academy and its publications. On 25 May 1784, the King chaired a special session and, on this occasion, the assembly presented him with the first five volumes of the Mélanges. This led to several fruitful developments and within a few years Turin Academy was engaged in a lively correspondence with two Swedish Academies—those of Uppsala and Stockholm—whose issues were regularly present in its Library\textsuperscript{57}.

One of the elements that contributed to the editorial success of the Academy series is the fact that their content was up-to-date. The works that appeared in these volumes reflected the most recent developments in research, while internal references, bibliographies and quotations demonstrated the academicians’ ability to keep themselves informed about themes currently under discussion in the scientific community. In order to constantly expand their international publications, the Academy deliberately enriched its Library through the purchase of books, monographs, and periodicals. In January 1784, the assembly decided to purchase "journals, booklets and periodicals from France, Germany, and Great Britain"\textsuperscript{58} and assigned the editor-in-chief to manage the orders. The Academy's members themselves suggested the purchase of works which were considered of particular importance for their own discipline. For instance, in 1792 Giobert requested a new French journal that published the abstracts of German periodicals\textsuperscript{59}. According to the Catalogue of the Scientific Collections and Changes drawn up by Francesco G. Napione in the 1830s\textsuperscript{60}, the Library of the Academy rapidly acquired sixty-five collections of learned journals from Austria, Belgium, France, Germany, Great Britain, Ireland, Portugal, Russia, Sweden, Switzerland, and the United States of America. The acquisition of these collections gave the Academy a means to enter into and broaden its contacts with other foreign institutions. For example, in 1784, the Berlin Academy of Sciences, which had maintained a correspondence with Turin academicians since the times of the Società Privata Torinese, presented their colleagues in Turin with the first eleven volumes of the Nouveaux Mémoires as a result of Euler’s intervention\textsuperscript{61}. Turin Academy returned the favour by sending to Berlin Academy of Sciences the 1784 and 1785 issues. The friendly nature of this relationship between the two institutions is illustrated in the following comment:

"[...] l’Académie R.l.e des Sciences de Turin ne pouvoit rien recevoir de plus flateur ni de plus propre à l’encourager que la présente lettre, dont votre illustre Compagnie vient de l’honorer. Elle reconnait avec admiration dans le recueil de vos Nouveaux Mémoires non seulement un trésor précieux de lumière et de connaissances, mais un exemple excellent. Elle est charnée de se voir si obligeamment ouvrir une Correspondance, qu'elle ambitionnait dans le même esprit, qui vous aime. Le champ de ses travaux est plus borné. Mais les vues du Monarque Éclairé de qui elle tient une nouvelle existence, n’exigent pas moins qu’elle embrasse avec zèle tous les moyens d’améliorer les parties qu’elle cultive\textsuperscript{62}.

53. Cf. Baglioni, La corrispondenza, pp. 137; 180; 182.
54. Cf. Minutes, III, 1, 15, p. 89.
57. Minutes, III, 1, 15, pp. 62; 65; 67-68; 70; 71-75; 189; 307.
59. Cf. Minutes, III, 1, 16, p. 153. This periodical could be the Bibliothèque germanique, but research in AST Archives does not support this claim. Moreover, the AST Library does not include the Bibliothèque germanique in its collections and, in the Minutes of the sittings, no evidence is provided about the readings of this journal.
61. Cf. Minutes, III, 1, 15, pp. 78; 80; 204.
62. "Registro attivo delle lettere spedite alle Accademie Estere, ed a diversi letterati (1784-1799)", Archives of AST, VI, 3, 273, cc. 4-5; 11, quotation at e. 4.
In February 1787, there was a similar correspondence with the Société de Philadelphie:

"L'Académie R. des Sciences de Turin prie, Messieurs, votre illustre Société d'agréer ses volumes comme une preuve, un effet de sou empre­
sement à entretenir le mieux qu'elle peut, une correspondance dont elle fait
gloire, dont elle voit avec satisfaction dans sa bibliothèque naissant un
gage précieux, le 1er volume de vos Transactions. Nous sommes flattés,
Messieurs, que la Commission que nous avons de notre Compagnie de vous
témoiner ses sentiments, nous donne un titre à vous assurer nommément
de l'estime très distinguée avec laquelle nous avons l'honneur d'être ..." 63

Similar exchanges existed between Turin Academy of Sciences and those of
Boston, Toulouse, Paris, Stockholm, and the London Society of Longitudes.64
The correspondence between the Paris Académie des Sciences and Turin Acad­
emy has been lost, but it is possible through the Minutes to determine that the
exchange of relevant publications continued until 1794 and, following a temporary
break, began again involving a collaboration with the Institut de France.65

Finally, another letter dated 7 September 1793 clarifies the troubles concern­
ing the purchase of the volumes of the London Philosophical Transactions:

"Notizie del Libraio Elmsley di Londra, relativamente ai volumi delle Tran­
sazioni filosofiche della Società R. de Londra. Finalmente on a reçu une réponse de Londres en voici la copie. Les Vol. des Transactions philo­
sophiques que vous en avez commissionés sont si rares que je ne sais plus en
trouver pour moi même, nous gettons toutes les ventes pour cela, pour
nous compléter des exemplaires de cet Ouvrage très rare et très cher, si
votre Pratique veut bien se contenter des volumes que l'on trouve dans le
commerce et des autres livres de votre note vous n'avez que a parler mais
je ne pourrai vous fournir tout sans le plus grand hasard du Monde ..." 66

All these efforts to purchase books and periodicals were justified with the ben­
efits to academic scholarship that would have derived from complete access to the
most advanced scientific literature. The Minutes recorded a number of discus­
sions concerning the procedures for transmitting and conveying this knowledge
within the Academy. For example, in the session of 21 March 1784:

63 "Registro attivo delle lettere spedite alle Accademie Estere, ed a diversi letterati (1784-
1799)", Archives of AST, VI, 3, 273, c. 12.
64 Cf. Minutes, III, 1, 15, pp. 90; 266; 307; Minutes, III, 1, 16, pp. 66; 174; 337.
65 Cf. Minutes, III, 1, 16, pp. 316; 318-320; 333.
66 "Rapporti con altre Academie ed Enti (1792-1917)", Archives of AST, V, 201. Cf. also
Minutes, III, 1, 15, p. 175.

"the President discussed the journals and the periodicals [...] and
remarked that, in order to obtain from them the greatest benefit, the Acad­
emy members had to share the duty of giving reports on the more signifi­
cant contents of these issues" 67.

This suggestion was immediately put into action: Carlo L. Morozzo reported
on the Milan Opuscles, Valperga di Caluso read the Journal des savants, Gio­
vanni M. Boccardi the Giornale di Manheim, Ludovico Richeri summarised the
Observations de physique, Ignazio Sonis the Giornale di Medicina, Nicolò di
Robilant and Prospero Balbo reviewed respectively German and English periodi­

cals. The request for reports from international issues was renewed in 1797:68:
Antonio M. Vassalli was responsible for the reports on the Giornale di Fisica and the
Bulletin des sciences, Bailly S. Martin tended to Giornale di Manifatture ed Arti, and the President Morozzo to the Magazzino Enciclopedico. For this reason,
the coverage of readings in the academic sessions between 1784 and 1790 is consi­
derable. There were a total of 5 reports on the Journal des savants, 15 on the
Journal de Paris, 3 on Philosophical Transactions, 5 on the Giornale di Fisica,
and seven on the Bulletin des sciences.69

The Academy members defended their reading of European periodicals by
various remarks and proposals. The Minutes indicated, for example, that:

"Conte Morozzo read an article of the Journal de Paris with an abstract of
a memoir by Meunier and Lavoisier where they try to show with an
experiment that water is not an element, but it is a compound of flammable
and non flammable air. Conte Morozzo added to this reading many per­
sonal remarks in order to show that the experiment and the arguments
of Meunier and Lavoisier do not sufficiently prove their thesis." 70

67. Minutes, III, 1, 15, p. 51.
68. Cf. Minutes, III, 1, 16, p. 290: "The President remarked that, since the Academy's Members
cannot read every foreign journal, their number being great, it will be useful for everyone that some
academicians should report on the contents of those journals that are significant for their studies.
These reports had to be read consecutively in the various sessions and, in this way, everyone could be
up to date on everything." 69.
69. Cf. Minutes, III, 1, 15, pp. 53; 55; 59; 63; 77; 98; 101; 104; 115-116; 123; 128-129;
145; 151; 154; 156; 161; 175; 180; 195; 215; 217; 223; 228; 231; 277; 284; 287; 292; 293;
Minutes, III, 1, 16, pp. 90; 178; 292; 293; 306; 297; 298; 299; 300; 301; 303; 305; 313; 317;
320. The periodicals read or abstracted during the sittings were the following: Chemische Annalen
für die Freunde der Naturwiss, Arzneyfahrlehr, Haushaltungskunst und Manufacturen - Hesmladet-
Legaz; Efemeri Astronomiche di Parigi; Journal de medicine, chirurgie, pharmacie ... Journal
de Sciences; La gazette de Paris; Chemisches Journal für die Freunde der Naturwiss, Arzneyfahr-
lehr, Haushaltungskunst und Manufacturen (von Crell); Journel de Paris; Progrés des arts
umanes et de la science et des arts; o sia Giornale letterario di Venezia; Philosophical Transac­tions
of the R. Society of London; Annales de chimie, ou recueil des mémoires concernant la chimie et les arts
qui en dépendent; Bulletins des sciences; Giornale Fisico-Matematico; Journal d'observations sur la
physique, sur l'histoire naturelle et sur les arts et métiers (Rastor); Magazzino enciclopedico; Recueil
périodique de la société de médecine de Paris. The contents of these readings were unfortunately not
recorded in detail.
70. Minutes, III, 1, 15, p. 63.
The members often repeated the experiments described in those periodicals and reviewed the results, suggesting alternatives and improvements. For instance:

"Conte Morozzo had read some article of the Journal de Paris on the experiments by Lavoisier and Meunier in order to prove that water is not an element; afterwards he left a sealed envelope containing the results of his experiments and observations about this subject that he could not develop and expound at present because of other urgent business."

The information gathered through the abstracts of foreign periodicals as well as the presentation of books during the sessions contributed to a complete renewal of the scientific background in Piedmont, with positive developments in the fields of teaching and politics as well. The members of Turin Academy were often lecturers at the University and, therefore, had the means to divulge in their lectures, the recent trends in research derived from these academic debates. Moreover, many academicians were involved in hydraulic, geological, and mineralogical projects pursued by the Savoyard Court and they had the opportunity to travel abroad and discuss the results of these expeditions inside the Academy while promoting new collaborations with foreign institutions. Finally, towards the end of the 18th century, when the Academy set up prizes for foreign members, this provided further opportunities for the transfer of knowledge.

In conclusion, the history of the Academy’s series provides significant information about the diffusion of scientific research and knowledge in Italy during the final decades of the 18th century. The role of the Academy’s series emerges as a means of interaction with current scientific information and as a vehicle for the diffusion of new scientific research addressed to a diversified reading public. A meaningful acceleration in the cultural development of Piedmont arose from this editorial enterprise and the Academy of Turin promoted an osmotic exchange between science and technology, which would prove successful throughout the first half of the 19th century.

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