

The Accademia dei Lincei's network and practices in the publication of the *Tesoro messicano**

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On 10 October 1636, the geographer Johannes de Laet (1581-1649) sent a letter from Leiden to the philologist Lucas Holstein (1596-1661) in Rome, in which he eagerly inquired about the upcoming publication of a certain book:

For many years we have been awaiting the compendium of this great work, compiled by this most learned man Nardus Antonius Reccus (as I learned from Fabio Colonna). Its printing was begun a long time ago in Rome, and we have seen the printed title page here [i.e. in Leiden] some years ago. Last year I asked a member of our Elzevier family to inquire in Rome about the prospects of that book: I understand the work has been paused or even aborted, for a similar book has been edited by a certain Nierenberg in Belgium.¹

The 'compendium' referred to in the letter is an encyclopedia of the flora and fauna of Mexico. As director of the Dutch West India Company and editor of scientific books on the natural history of Latin America, De Laet was obviously interested in such a work. His request for information to Holstein was a logical one: not only was Holstein the Barberini librarian, and thus at the center of the Roman book market and publishing scene, but more importantly, he had been a member of the Accademia dei Lincei since 1626. This academy was preparing the publication of this scientific encyclopedia, which would finally be published in 1651 under the title *Rerum*

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¹ Leiden, Universiteitsbibliotheek, MS BPL 1830: 'Plurimi iam sunt anni quibus expectavimus compendium magni illius operis concinnatum a doctissimo viro Nardo Antonio Reccho, (uti e Fabio Columna didici) et Romae excudi iam dudum coeptum, cuius et titulum excusum ante aliquot annos hic vidimus; dederam superiori anno cognato Elzeviriorum nostrorum in mandatis ut Romae inquireret; quid porro spei esset de illo libro; sed [strikethrough: quia] intelligo operam intermissam aut etiam omissam, quia similis liber a quodam Nuerenbergio in Belgio erat editus.' This is a passage from a copy of a letter in the Vatican Library (Barb. Lat. 2182), transcribed in G. Gabrieli, *Il carteggio linceo*, Roma, Accademia Nazionale dei Lincei, 1996, no. 1038, p. 1243. See for translations of the passage – here amended with the help of Leanne Jansen – R. Chabrán & S. Varey, 'The Hernández Texts', in: S. Varey (ed.), *The Mexican Treasury: The Writings of Dr. Francisco Hernandez*, Stanford, Stanford University Press, 2000, p. 17 and I. Baldriga, 'The influence of Clusius in Italy: Federico Cesi and the Accademia dei Lincei', in: F. Egmond, P. Hoftijzer & R.P.W. Visser (eds.), *Carolus Clusius: Towards a cultural history of a Renaissance naturalist*, Amsterdam, KNAW, 2007, p. 261.

medicarum Novae Hispaniae thesaurus ('Treasury of the Medical Matters of New Spain'), better known as the *Tesoro messicano* ('Mexican Treasury').²

The Accademia dei Lincei was founded in 1603 by the young Umbrian-Roman aristocrat Federico Cesi (1585-1630) together with three friends: two other Italian aristocrats, Francesco Stelluti (1577-1652) from Fabriano and Anastasio de Filiis (1577-1608) from Terni; and one Catholic exile from the Low Countries, the physician Johannes van Heeck (Heckius) (b. 1579) from Deventer, who was a graduate from the University of Padua. From 1610 onward, the academy recruited new members. The first to join the four founders was the polymath Giambattista della Porta (1535-1615), who was made head of the Neapolitan branch of the academy.³ In 1611, the Linceans recruited their most famous and important member, the astronomer and mathematician Galileo Galilei (1564-1642).

However, in the context of this article the entry of Johannes Schreck (alias Terrentius) (1576-1630) and Johannes Schmidt (alias Faber) (1574-1629) – the former a physician and mathematician from Konstanz and the latter a professor of medicine at the University of Rome ('La Sapienza') and Keeper of the Vatican gardens from Bamberg – in the same year is more relevant. It has been argued that their admission to the academy was directly related to a manuscript about the natural history of Mexico that Cesi obtained from the jurist and bibliophile Marco Antonio Petilio (ca. 1566-1640) around 1610.⁴ It is this manuscript that formed the basis for the *Tesoro*.

The publication of the *Tesoro* would become the Lincei's largest, longest, and most complex project. The book also is the best example of the *collective* nature of the Lincean scientific enterprise, as it contains contributions by Cesi, Terrentius, Faber, and Colonna, while additional research and data collection was carried out by Cassiano dal Pozzo (1588-1657), Cardinal Francesco Barberini (1597-1679), Francesco Stelluti, and Justus Ryckius (1587-1627).⁵ The *Tesoro* was the first collective natural history project in Europe that was carried out on an encyclopedic scale. Other features

² The full official title of the work is *Rerum medicarum Novae Hispaniae thesaurus, seu, Plantarum animalium mineralium Mexicanorum historia*. Whereas the title page only mentions Francisco Hernández, Nardo Antonio Recchi, and Johannes Terrentius as authors and editors, the names of Johannes Faber, Fabio Colonna, and Federico Cesi are clearly indicated on the first pages of the parts they composed. The book exists in various editions, with different frontispieces, dedications, indices, and appendices – evidence of its long and complicated compilation process and its different moments of printing. For this reason it has been said that there are no two copies exactly the same. A. Ubrizsy Savoia, 'Federico Cesi (1585-1630) and the Correspondence Network of his Accademia dei Lincei', in: *Studium*, 4, 4 (2011), pp. 202-203. The main body of the work, however, consisting of descriptions and illustrations of the Mexican plants, animals, and minerals, is identical in all versions. Unless indicated otherwise, in this article references to the *Tesoro messicano* are to the copy in the Biblioteca dell'Accademia Nazionale dei Lincei e Consiniana: Arch. Linc. 31. An anagraphic reprint of this copy was published in 1992 by the Accademia Nazionale dei Lincei and the Istituto Poligrafico e Zecca dello Stato, Libreria dello Stato, Roma, 1992, with a separate introductory essay by G.B. Marini Bettòlo, 'Guida alla lettura del Tesoro messicano: Rerum medicarum Novae Hispaniae Thesaurus'. A scan of the same copy can also be found online at the website of the World Digital Library: <https://www.wdl.org/en/item/19340/view/1/1/>.

³ Auxiliary branches in other European cities and even in other continents were conceived, but never realized.

⁴ Baldriga, 'The Influence of Clusius in Italy', cit., p. 260 and D. Freedberg, *The Eye of the Lynx: Galileo, his friends, and the beginnings of modern natural history*, Chicago, University of Chicago Press, 2002, p. 257. Neither the date nor the precise circumstances under which Cesi obtained the manuscript is known. The earliest reference to the Mexican material in the remaining documents of the Linceans concerns a reference in one of Van Heeck's letters (2 June 1608), in which he recounts to Cesi about having seen the images in the library of the Escorial in Madrid. M. Guardo, 'Nell'officina del Tesoro messicano. Il ruolo misconosciuto di Marco Antonio Petilio nel sodalizio linceo', in: M.E. Cadeddu & M. Guardo (eds.), *Il "Tesoro Messicano": Libri e saperi tra Europa e Nuovo Mondo*, Firenze, Leo Olschki, 2013, pp. 70-71.

⁵ See for a discussion of the members and their contributions to the *Tesoro* Marini Bettòlo, 'Guida alla lettura del Tesoro messicano', cit.

that make it an important work in the history of science are the systematic coupling of the descriptions and images, and the fact that it was based on material that was collected and produced in Mexico, partly by indigenous ‘scientists’ and ‘artists’ with knowledge of botany and medicine.⁶

The material for the *Tesoro* was gathered by the Spanish royal physician, Francisco Hernández (ca. 1515-1587), during a scientific expedition in Mexico between 1571-1577. Philip II of Spain had sent Hernández to Latin America in order to collect information on the medicinal properties of the local flora and fauna. After Hernández’s return to Spain, his manuscripts were edited and abridged by another royal physician, the Italian Nardo Antonio Recchi (ca. 1540-1594), mentioned by De Laet in his letter. Recchi brought his compendium, together with hundreds of color images that had been copied from Hernández’s originals, to his fatherland in 1589 on his appointment as *archiatra* (first physician) of the kingdom of Naples.⁷ When the Lincei obtained the compendium from Recchi’s nephew and heir, Marco Antonio Petilio, they immediately commenced preparations for its publication.

After a promising start, in which the Lincei received a papal printing privilege for the city of Rome (1612),⁸ annotated and updated the botanical part of the Hernández-Recchi manuscript, and had a substantial number of woodcuts made for the illustrations, the book’s publication seemed imminent. However, doubts about the quality and accuracy of the annotations and illustrations, the desire to include all available information and most recent scientific insights, and the priority of other projects prompted the academicians to keep reworking and revising their annotations, commentary, comparisons, illustrations, and discursive style for the next four decades until a definitive version of the *Tesoro* was finally published in 1651 – more than forty years after the start of the project, and more than twenty years after Cesi’s death, which had resulted in the suspension of most of the academy’s activities. The final product bears the scars of this long and difficult birth as the comments on the descriptions of the plants and animals are of uneven length and quality, and the book lacks a clear overall structure. In the meantime, other authors had published parts of either Hernández’s manuscript or Recchi’s abridgment thereof, including the Jesuit Juan Eusebio Nieremberg (1595-1658) who worked in Madrid and who is mentioned by De Laet in his letter, but none of these publications were as comprehensive or had the wealth of visual material as the Lincean edition.⁹

Publishing a scientific treatise like the *Tesoro* in seventeenth-century Rome required a vast network. In the first place, with regard to the textual content of the book, the Lincei depended on colleagues and friends, both within Rome and the Republic of Letters, for help with the descriptions and analyses – i.e. annotating, checking, updating, and comparing the plants and animals with European species.¹⁰

⁶ Freedberg, *The Eye of the Lynx*, cit., pp. 246-271; L. Guerrini, ‘The “Accademia dei Lincei” and the New World’, *Max Planck Institute for the History of Science*, https://pure.mpg.de/rest/items/item_2274289/component/file_2274287/content, preprint 2008, pp. 8-9 (23 November 2008).

⁷ Guardo, ‘Nell’officina del *Tesoro messicano*’, cit., p. 69. Hernández’s original manuscript, which he had sent to Philip II in the 1570s, was lost when in 1671 a fire destroyed the library of the Escorial. Hernández’s own copy of his work, divided over two archives, is housed in Madrid: Biblioteca Nacional, MSS 22,436-22,439 and Ministerio de Hacienda, MSS 931, 932. J. Bustamante, ‘The Natural History of New Spain’, in: S. Varey (ed.), *The Mexican Treasury: The Writings of Dr. Francisco Hernandez*, Stanford, Stanford University Press, 2000, pp. 26-39.

⁸ S. Brevaglieri, ‘Il Cantiere del *Tesoro Messicano* tra Roma e l’Europa. Pratiche di comunicazione e strategie editoriali nell’orizzonte dell’Accademia dei Lincei (1610-1630)’, in: S. Brevaglieri, L. Guerrini & F. Solinas (eds.), *Sul Tesoro Messicano & su alcuni disegni del Museo Cartaceo di Cassiano dal Pozzo*, Roma, Edizione dell’Elefante, 2007, pp. 47-48.

⁹ See for an overview of these publications Chabrán & Varey, ‘The Hernández Texts’, cit.

¹⁰ Ubrizsy Savoia, ‘Federico Cesi’, cit., p. 206.

Second, access to artistic circles and a basic knowledge of artistic production (e.g. drawing and woodcutting) was necessary for the realization of the graphic material of the treatise, which amounted to almost 800 illustrations. Third, the printing and publishing entailed obtaining printing privileges, negotiating censorship, devising marketing strategies, and finding access to adequate printers and binders.

In the last two decades several articles have been published that have substantially advanced our understanding of the compilation and publication process of the *Tesoro* by relating it to the network of the Accademia dei Lincei.¹¹ The authors of these studies have done so by borrowing concepts from the social sciences such as “practice”, “cultural broker”, “materiality”, and, indeed, “network”. However, concepts of this kind are seldom applied with methodological rigor or linked to a larger theoretical framework in these studies. What is more, the use of concepts from the social sciences notwithstanding, the interpretations of the publication of the *Tesoro* tend to be written from an individual perspective, as the authors focus on the role of certain Lincei or their patrons. As a result they have provided only partial views, and it remains unclear how the manifold aspects and functions of the Lincei’s network mutually interacted in the enterprise of the *Tesoro*.¹²

The aim of this article is to provide a more integral account of the compilation and publication process of the *Tesoro* with the help of a theoretical framework in which the concept of “practice” is clearly defined. In this framework social life is conceived of as an overlapping web of practices. The term cultural or social “practice” refers to a “unit of bodily doings and sayings” that are linked together in three ways: by expressing hierarchically ordered goals, by explicit rules, and by practical skills or “know how”. This means that practices can be reconstructed by identifying what goals were pursued by, which skills were required from, and which rules were observed (or transgressed) by their practitioners. In addition, the material culture, including images, treatises, and works of art play an integral role in the functioning of a practice.¹³

From this perspective, at least four practices relevant to the Lincean’s compilation and publication of the *Tesoro* can be reconstructed and analysed: patronage, scientific, artistic, and publication practices, whereby the first type functions on a different level as it is dispersed in the other three types of practices. By distinguishing these practices and showing how they overlapped with and diverged from each other, it is possible to provide a more comprehensive view of the relative success and failure of the Lincean project, a view that lies beyond the standard interpretation in terms of the ideas and efforts of individual actors.

¹¹ S. de Renzi, ‘Writing and Talking of Exotic Animals’, in: M. Frasca-Spada & N. Jardin (eds.), *Books and the Sciences in History*, Cambridge, Cambridge University Press, 2000, pp. 151-167; Brevaglieri, ‘Il Cantiere del *Tesoro Messicano* tra Roma e l’Europa’, cit.; S. Brevaglieri, ‘Science, Books and Censorship in the Academy of the Lincei: Johannes Faber as Cultural Mediator’, in: *Conflicting Duties*, Warburg Institute Colloquia 15 (2009); Ubrizsy Savoia, ‘Federico Cesi’, cit.; E. Antetomaso, ‘Il censimento degli esemplari del *Tesoro messicano*: nuovi esiti di un’indagine bibliologica’, in: M.E. Cadettu & M. Guardo (eds.), *Il ‘Tesoro Messicano’: Libri e saperi tra Europa e Nuovo Mondo*, cit., pp. 95-113.

¹² The aforementioned publications focus either on the function of the Lincei’s network in securing publication privileges (Brevaglieri and Antetomaso) or in obtaining additional information on the species described by Hernández (De Renzi), but not on both or in relation to each other. Moreover, the artistic aspect of the project of the *Tesoro* remains obscure altogether.

¹³ See, for an elaboration and justification of this methodological perspective, which is based primarily on the social theoretical insights of Theodore Schatzki and Pierre Bourdieu, M. Jonker, ‘The Academization of Art: A Practice Approach to the Early Histories of the Accademia del Disegno and the Accademia di San Luca’, PhD diss., University of Amsterdam, 2017. See for an art historical application of this framework in this journal M. Jonker, ‘Practices and Art Historical Meaning: The multiple meanings of Guido Reni’s *Abduction of Helen* in its early years’, in: *Incontri*, 25, 2 (2010), pp. 149-162.

Patronage practices: forging a network

One of the main goals of seventeenth-century patronage practices was the construction and maintenance of networks, consisting of individuals of various social standings for the sake of exchanging favors when necessary. The Accademia dei Lincei can itself be seen as a patronage network.

The first and foremost patron of the Accademia dei Lincei was, of course, Federico Cesi. Elected as *principe perpetuo* by the co-founders of the academy in 1603, he was the center of the academy's activities, composing its statutes, sponsoring its scientific projects and publications, as well as offering facilities – library, meeting room, laboratory – in his palaces in Rome and Acquasparta. The main source of Cesi's wealth was his family's connection to the Church, most importantly the fact that several of his relatives were cardinals. However, Cesi's financial means were insufficient to realize all the Lincean scientific projects on his own.¹⁴ Other patrons were necessary to provide funds, access to foreign markets and entry into relevant scientific circles, or to negotiate with censors. The election of Maffeo Barberini (1568-1644) to Pope Urban VIII in 1623 proved fundamental in this respect. Both Maffeo and his nephew, Cardinal Francesco Barberini, were supporters of the sciences (and arts). The entrance of the latter into the Accademia dei Lincei in 1623 meant that the academy now had a protector in the highest echelons of power in seventeenth-century Rome.

Two Linceans had a particularly important role in the establishment and maintenance of an ecclesiastical patronage network, because of their proximity to the papal court. As Keeper of the Vatican gardens, Johannes Faber was especially important for the connections between the transalpine world and the Roman cultural, political, and ecclesiastical elite.¹⁵ He also functioned as broker between German noblemen and ecclesiastics and the Accademia dei Lincei, such as the banker and astronomer Marcus Welser (1558-1614), who himself joined the academy in 1612 and corresponded with his colleagues from Augsburg. Moreover, Faber procured the protection of Cardinal Eitel Friedrich von Hohenzollern-Sigmaringen (1582-1625) for the academy.¹⁶ The co-optation of Faber's correspondence network was probably one of the main reasons for recruiting him for the academy in the first place – in addition to his botanical and medicinal knowledge, which Cesi deemed crucial for carrying out the project of the *Tesoro*. Faber's death in 1629 diminished the academy's chances of successfully marketing and publishing the book in northern Europe.¹⁷

As secretary of *cardinal-nipote* Francesco Barberini, Cassiano dal Pozzo was another crucial cultural broker for the Accademia dei Lincei in the context of the *Tesoro*. Dal Pozzo was born into a noble family from Turin, educated at the University of Pisa under Medici protection, entered the household of Cardinal Francesco Maria del Monte (1549-1627) in 1612, became a member of the Accademia dei Lincei in 1622, and joined Barberini's household in the following year. His background and social position allowed him to amass important art, antique, and natural history collections, as well as graphic reproductions of the objects and artifacts in the collections of others – i.e. his famous *Museo cartaceo* ('Paper Museum') – and also to mediate between artists, scientists, and potential patrons.¹⁸ Knowing how and when to deploy the

¹⁴ See for Cesi's financial problems in the 1620s F. Giurleo, *I Cesi: Storia e cronistoria di una famiglia nobile di Acquasparta*, Viterbo, ArcheoAres, 2016, pp. 145-150.

¹⁵ Brevaglieri, 'Science, Books and Censorship', cit., p. 134. See for Faber's role as a political and cultural broker between Rome and Bavaria also S. De Renzi, 'Medical competence, anatomy and the polity in seventeenth-century Rome', in: *Renaissance Studies*, 21, 4 (2007), pp. 551-567.

¹⁶ Brevaglieri, 'Science, Books and Censorship', cit., pp. 134 and 137-139.

¹⁷ Brevaglieri, 'Il Cantiere del *Tesoro Messicano* tra Roma e l'Europa', cit., pp. 3 and 5.

¹⁸ P. Findlen, 'Cassiano dal Pozzo: A Roman virtuoso in search of nature', in: H. McBurney, P. Findlen, C. Napoleone & I. Rolfe (eds.), *Birds, Other Animals and Natural Curiosities, Volume 1* (The Paper

relevant features of one's background – i.e. social, national, religious, political proximity to potential patrons – counted as a relevant skill within these patronage practices. In the context of the *Tesoro*, Faber used his German background and Dal Pozzo his noble birth to establish and maintain a patronage network.¹⁹

The production of highly specialized cultural artifacts, such as artworks or scientific treatises, was a secondary goal of patronage practices in the sense that, as gifts, these products were used to establish and maintain patron-client relations. The Lincei produced two of such products that were directly related to the compilation and publication of the *Tesoro*.²⁰ The first was a small booklet with woodcuts of Mexican plants – *Libellus e Mexicanarum plantarum imaginibus* – that the Lincei donated to the bishop of Bamberg, Johann Gottfried von Aschhausen (1575-1622) during his diplomatic visit to Paul V in Rome on behalf of Emperor Matthias II in the fall and winter of 1612-1613. In Rome, Aschhausen met Cesi and the other academicians on several occasions. Apparently, the Lincei were impressed by the bishop's erudition: not only did Faber still praise him fifteen years later in his part of the *Tesoro* on the Mexican animals,²¹ but they also offered him several of their publications, including the *Libellus e Mexicanarum plantarum imaginibus*, which they had prepared specifically for the occasion.²² This gift was not simply a token of friendship or appreciation, but also served to establish a patronage relation with someone in close proximity to the Holy Roman Emperor.²³

The *Libellus* can be seen as a prepublication, teaser, or demonstration of what the academy could deliver and what the reader could expect concerning the woodcuts of the *Tesoro*. It contained 80 images of the 'most beautiful of the Mexican plants', which were preceded by dedicatory verses to the bishop by Faber (in Latin) and Luca Valerio (in Greek).²⁴ It is known that several other copies of the booklet were printed. The only extant example known today is conserved in the Vatican Library and probably also had representational and network functions.²⁵ The binding is decorated with the cardinalitial seal of the Barberini (a cardinal's hat with three bees underneath it), which means that it probably was a gift to Maffeo Barberini, future Pope Urban VIII, who, around the time of the printing of the booklet was corresponding with Galileo and owned several of his works.²⁶ This booklet contains only 68 woodcuts, and does

Museum of Cassiano dal Pozzo Series B: Natural History - Parts IV/V), 2 vols., London, Brepols, 2017, pp. 18-42.

¹⁹ I. Fosi, 'Johannes Faber: prudente mediatore o "esterno persecutore dei protestanti"', in: *I primi Lincei e il Sant'Uffizio: Questioni di scienza e di fede*, Atti dei convegni Lincei 215, Roma, Bardi, 2003, pp. 198-199.

²⁰ Antetomaso, 'Il censimento degli esemplari del Tesoro messicano', cit.

²¹ *Tesoro*, p. 779.

²² In the minutes of the academic meeting of 13 January 1613 – attended by Faber, Luca Valerio and Angelo de Filiis – Faber writes that the gifts had been presented to the bishop by Cesi. I. Baldriga, *L'Occhio delle lince: I Primi Lincei tra Arte, Scienza e Collezionismo (1603-1630)*, Roma, Accademia Nazionale dei Lincei, 2002, p. 248. In a letter to Galileo of 18 January 1613, Cesi also contemplates donating a telescope to Aschhausen, as this would bring them honour in Germany as well as the acquisition of a good friend. Gabrieli, *Il carteggio linceo*, cit., no. 207, p. 316.

²³ See for Faber's role as cultural and political mediator between Rome and the Holy Roman Empire Fosi, 'Johannes Faber', cit. See for studies on the complex (political) interconnections between the papacy and the Holy Roman Empire I. Fosi & A. Koller (eds.), *Papato e Impero nel pontificato di Urbano VIII (1623-1644)*, Città del Vaticano, Archivio Segreto Vaticano, 2013.

²⁴ Gabrieli, *Il carteggio linceo*, cit., no. 224, pp. 331-333 (letter from Cesi to Galileo, 2 March 1613): 'Per dilettarsi de' semplici particolarmente, le habbiamo anco dato un libretto di figure, al numero d'80, delle più belle delle piante Indiane, e n'includo l' scrittioncella e versi in fretta postovi'.

²⁵ Rome, Biblioteca Apostolica Vaticana (BAV), Barberini N.VI 175.

²⁶ Antetomaso, 'Il censimento degli esemplari del Tesoro messicano', cit., p. 97. The Vatican copy could also have been a gift for Cardinal Francesco (or Antonio *junior*) Barberini, if the binding dates from the 1620s, instead of the moment of the printing of the booklet itself.

not have any text besides the dedications – so, no descriptions or even the names of the plants depicted.²⁷ A cursory comparison between the woodcuts in the *Libellus* and those in the *Tesoro* suggests that the same woodblocks were used, as the size and appearance are identical.

The second product directly related to the *Tesoro* and used by the Lincei to establish and maintain a patronage network was Faber's *Animalia mexicana* (1628), an extensive – almost 400-page – commentary on Hernández's descriptions of the Mexican animals that includes many digressions on the Roman intellectual scene in the 1620s, which are interesting precisely for reconstructing the Lincean network and their methods for verifying Hernández's descriptions.²⁸ In fact, the *Animalia mexicana* is an extract of the completed version of the *Tesoro*, as the page numbers start on 459. However, it is not exactly the same as the published versions of the *Tesoro*, as the dedicatee changed from Urban VIII in 1625 to Cesi in the late 1640s. Cesi was by then long dead, but apparently seen as a more suitable patron than a pope who was not liked by his successor, Innocent X.²⁹

Ten copies of the *Animalia mexicana* are either described in auction catalogues or can be found in European – mostly Roman – archives and libraries.³⁰ At least five of these have the same, sumptuous parchment binding and are decorated with gilded decorative motives and seals. Four of the seals represent cardinalitial coats of arms, including that of the Barberini twice. These copies were probably destined to Cardinal Francesco and Cardinal Antonio *junior* (1605-1671), who had been made cardinal by his uncle a year before the printing of the *Animalia mexicana*. The other two copies belonged to Cardinal Carlo Emanuele Pio di Savoia (1585-1641) and a member of the Colonna family – probably Girolamo (1604-1666), who also received his cardinal's hat from Urban VIII, and whose selection was announced on the same day as that of Antonio Barberini *junior*, 7 February 1628.³¹ It seems that even more than in the case of the *Libellus*, the Lincei donated the *Animalia mexicana* as a presentation copy to individuals with prestigious positions in the Church in order to cultivate and expand their existing patronage network.³²

An important rule within early modern patronage practices was letting the right amount of time pass between giving a gift and (indirectly) asking for a counter-gift (e.g. a favor). The laborious process of annotating the *Tesoro* made it difficult for the Accademia dei Lincei to comply with this rule, not least because some of the initial recipients had died in the meantime (e.g. Bishop Aschhausen and Pope Urban VIII).

Scientific practices: between tradition and innovation

The patronage network established by the Lincei through epistolary correspondence, gift-giving, and the recruitment of new members (cooptation of existing patronage networks) was subsequently deployed in other practices related to the publication of the *Tesoro*. The ultimate goal of the scientific practices in which the Lincei were

²⁷ It is not known whether the copy for Aschhausen had text beside the dedication.

²⁸ Brevaglieri, 'Il Cantiere del *Tesoro Messicano* tra Roma e l'Europa', cit., p. 3 and De Renzi, 'Writing and Talking', cit.

²⁹ Cfr. for instance the *Animalia Mexicana* and the *Tesoro* in the Biblioteca Casanatense in Rome, O V 9 and O V 2, respectively.

³⁰ Antetomaso, 'Il censimento degli esemplari del *Tesoro messicano*', cit., pp. 104-113.

³¹ *Ivi*, pp. 112-113. Antetomaso has identified the binding as that of the Soresini, a family of binders connected to the Vatican.

³² In the Lincean context presentation copies of scientific treatises were also handed out to potential and actual patrons on other occasions. For instance, Dal Pozzo printed separate editions of his *Uccelliera* (1622) with augmented and hand-colored plates of birds. H. McBurney, "'So Many Celestial Animals so Vividly Drawn': The Drawings of Birds in the Paper Museum", in: H. McBurney; P. Findlen, C. Napoleone & I. Rolfe (eds.), *Birds, Other Animals and Natural Curiosities*, cit., pp. 66-67.

engaged was to come to a systematic classification of the natural world.³³ In order to achieve it, the Lincei verified and checked as much as possible the descriptions contained in Recchi's compendium, indicating medicinal virtues of the species described. In this process they not only relied on traditional methods, such as comparison with established ancient and modern authorities – e.g. Theophrastus, Galen, Dioscorides, Pliny, and Clusius – but also made use of modern approaches, such as personal and direct observation of the plants, animals, and minerals that had been brought from the New World to European zoological and botanical gardens, cabinets of curiosities, and collections.

Their patronage and correspondence network played an important role in both instances. Whereas standard works like Pliny's *Natural History* and Dioscorides's *Materia medica* (in one of Pietro Andrea Mattioli's editions, with commentary and illustrations) were present in Lincean libraries,³⁴ some modern treatises were more difficult to acquire, and especially those produced outside of Rome. In those instances, the Lincei could deploy their network in order to acquire or borrow books from other scientists. Faber's northern European connections provided the Lincei with relevant publications, dispatched from Augsburg and accompanied by episcopal letters declaring that their content was non-heretic.³⁵ Moreover, for his commentary on the Mexican animals, Faber borrowed the seven books of the *Historia natural y moral de las Indias* of José de Acosta (Seville, 1590) from Cardinal Hohenzollern-Sigmaringen.³⁶

With the help of their correspondence network the Lincei were able to verify and check some of the descriptions in Recchi's compendium. Through the exchange of letters they engaged in discussions at a distance, which both replaced and continued direct conversations with other scholars.³⁷ In his part on the Mexican animals, Faber repeatedly includes letters from other scientists. For instance, in his commentary on the *American Civet*, he reproduced two letters from his Neapolitan fellow-Lincean Colonna on the *European Civet*, as well as woodcut illustrations of this animal, by way of comparison.³⁸

Furthermore, epistolary contact among botanists in this period included the exchange of dried specimens, images, bulbs, and seeds, as well as directions for watering and growing plants.³⁹ This means that the Lincei could analyse some of the specimens described by Hernández and Recchi *ad vivum* in their own gardens or in those of colleagues. An interesting figure in this context was the Dutch apothecary and humanist Hendrik de Raef, Italianized as Enrico Corvino (d. 1639), who had lived in Rome since 1591 and owned a well-known botanical garden in the city.⁴⁰ Although not a member of the academy himself, he seems to have been a close friend of the Lincei

³³ Guerrini, 'The "Accademia dei Lincei"', cit., pp. 8-9.

³⁴ See for example Gabrieli, *Il carteggio linceo*, cit., no. 913, pp. 1114-1115, on the hand-colored edition of Mattioli owned by the Dal Pozzo brothers.

³⁵ Fosi, 'Johannes Faber', cit., p. 196.

³⁶ Faber repeatedly refers to this book in the *Tesoro*, for instance in his commentary on the *Picus Americanus* (p. 704). Brevaglieri, 'Il Cantiere del *Tesoro Messicano* tra Roma e l'Europa', cit., p. 14; Brevaglieri, 'Science, Books, and Censorship', cit., pp. 138-139; Ubrizsy Savoia, 'Federico Cesi', cit., p. 205. Gabrieli, *Il carteggio linceo*, cit., no. 710, p. 839 (Faber to Cesi, 27 January 1624). It was Cardinal Hohenzollern-Sigmaringen who loaned Faber the book on the natural and moral history of the West-Indies. He was among the first thirteen members of the Propaganda Fide, the jurisdictional organization of the Roman Curia which was founded in 1622 to oversee the Catholic Church's missionary activities. See G. Pizzorusso, 'Cardinals and the Congregation of the Propaganda Fide 1622-1750', in: M. Hollingsworth, M. Pattenden & A. Witte (eds.), *The Companion to the Early Modern Cardinal*, Leiden, Brill (forthcoming).

³⁷ Ubrizsy Savoia, 'Federico Cesi', cit., p. 209.

³⁸ De Renzi, 'Writing and Talking', cit., p. 160. *Tesoro*, pp. 580-581.

³⁹ Baldriga, 'The Influence of Clusius in Italy', cit., pp. 249-250.

⁴⁰ M.B. Guerrieri Borsoi, *Gli Strozzi a Roma: Mecenati e collezionisti nel Sei e Settecento*, Roma, Fondazione Marco Besso / Colombo, 2004, pp. 121-140.

and accompanied them on botanical field trips in the hills outside of Rome.⁴¹ Corvino's garden is mentioned on several occasions by Terrentius in his annotations of the plants in the *Tesoro*. For instance, the presence of the *Ololuihqui* in Corvino's garden made it possible for Terrentius to classify this species in a European taxonomic system, i.e. as a member of the *Convolvulaceae* family.⁴²

Other specimens from the New World could be analysed in real life by the Lincei through their connections with botanists, physicians, and apothecaries in the Vatican and Naples. However, only a small percentage of the species described by Recchi were available in Europe in the first half of the seventeenth century. This meant that the Linceans also had to rely on the accounts of people with experience in the New World, e.g. soldiers, merchants, and missionaries.⁴³ Especially the last category plays an important role in Faber's description of the animals.

Both in his letters and in the *Tesoro*, Faber mentions that he was aided by five missionaries, who had spent many years in America. Three of these friars are named in the *Tesoro*: the Franciscan Gregorio de Bolivar and the Dominicans Pietro de Aloaysa and Bartolomeo de la Ygarza. Bolivar plays the most important part in Faber's narrative and he is the only missionary retraceable in other sources. The Franciscan friar helped Faber, for instance, with the descriptions of the *American Civet*, the *Mexican Bull*, and the *Mexican Boar*.⁴⁴

The skills needed by the Lincei to successfully participate in scientific practices included, thus, the traditional scholastic reading and writing of commentaries, but also the observation of plants and animals in botanical and zoological gardens (i.e. know what were relevant and what secondary features), knowing how to grow plants, and how to conduct scientific interviews with missionaries.

As far as rules are concerned, the fact that they founded their own institution means that they were not bound to the same rules as the universities. Indeed, Cesi worked for many years on the *Lynceographum*, the "rule-book" for his academy, which included laws prohibiting all political, religious, and even marital affiliations of the Lincei, because these things would hinder the freedom of philosophizing.⁴⁵ However, the participation in other practices made it necessary to break these rules on occasion. For instance, the need for a powerful patron made it possible for Cardinal Barberini to become a member of the academy; and because of Cesi's dynastic responsibilities he married (twice) and transgressed the rule of celibacy.

Artistic practices: epistemic images and academic circles

The production of luxury artifacts was one of the central goals of contemporary artistic practices. The iconography and style of these products depended on the functions and meanings they were supposed to have, e.g. religious, secular propagandistic, or decorative. That is to say, they depended on the other practices in which the artifacts were supposed to function.

⁴¹ For example, in October 1611, Corvino accompanied Cesi, Molitor, Faber, and Terrentius on a scientific excursion on Monte Gennaro. *Tesoro*, p. 503. Gabrieli, *Il carteggio linceo*, cit., no. 78, p. 175 (Cesi to Galileo, 21 October 1611). Baldriga, *L'Occhio delle lince*, cit., p. 1.

⁴² *Tesoro*, p. 145. The *Ololuihqui* or *Coaxihuitl* ('snake plant') is a large, woody vine used by Aztec healers in treatments for syphilis, flatulence, and broken bones, but also by priests to make contact with spirits and demons, as it had hallucinogenic effects.

⁴³ Freedberg, *The Eye of the Lynx*, cit., p. 260.

⁴⁴ *Tesoro*, pp. 539-540, 590-594, and 648-649. Cfr. G. Gabrieli, 'Un contributo dei missionari cattolici alla prima conoscenza naturalistica del Messico: nel "Tesoro Messicano" edito dalla prima Accademia dei Lincei (Roma 1651)', in: *Contributi alla storia dell'Accademia dei Lincei*, 2 vols., Roma, Bardi, 1989, 2, pp. 1567-1576.

⁴⁵ A. Nicolò (ed.), *Lynceographum quo norma studiosae vitae lynceorum philosophorum exponitur*, Roma, Accademia Nazionale dei Lincei, 2001.

Images played a fundamental role in the scientific projects of the Lincei from the start. Their books and manuscripts contain thousands of drawings and prints. This enormous graphic production attests to their profound conviction that the description, analysis, and understanding of the natural world – as well as the subsequent divulgation of the knowledge so acquired – should be carried out through a combination of text and image. This is connected to Cesi's notion of *pittura filosofica* ('philosophical painting'), which expresses the idea that art should (and could) be used as an instrument for understanding nature.⁴⁶ Although Cesi, Van Heeck, Stelluti, and Colonna were able amateur draftsmen themselves, they commissioned professional artists to produce the illustrations for their publications.⁴⁷

In the case of the *Tesoro*, the illustrations consist of the frontispiece – existing in various editions by Matthäus Greuter and his son Federico – and the almost 800 woodcut prints of the plants – some of which were already published in 1613 for the gift for Bishop Aschhausen – and animals. The identity of two of the artists who produced the woodcuts has been disclosed by Giovanni Baglioni in his *Vite* (1642). Baglione writes that Isabella Parasoli and Giorgio Nuvolostella produced 'engravings for the book of the herbs' ('intagli nel Libro dell'herbe') for Federico Cesi.⁴⁸

The 'book of the herbs' referred to by Baglione must be the *Tesoro*. Although nothing more of Parasoli is known in this context, the archive of the Accademia dei Lincei contains the draft of a contract between Cesi and Nuvolostella from October 1619 for the production of the woodcuts for the *Tesoro*. The contract specifies that the artist had to complete eight figures per month; in return he was paid 7 *scudi* and 25 *baiocchi*. In addition he received a daily 'share' ('parte') of bread and wine, which was taken away if one week passed without handing in a figure.⁴⁹

The large quantity of woodcut illustrations in the *Tesoro* and the speed by which they were produced in the 1610s means that the Lincei must have employed other artists besides Parasoli and Nuvolostella. However, their letters and other documents in the archive of the Accademia dei Lincei do not disclose the identities of these artists. It is also impossible to attribute the images to individual artists on stylistic grounds. Far from being mere decorations, the woodcuts fulfilled specific epistemic functions by complementing the textual descriptions of the plants and animals, and facilitating analysis and comparison.⁵⁰ Such a project required stylistic uniformity in the

⁴⁶ *Indicatio philosophicorum operum* in Cesi's 'Zibaldone', Naples, Biblioteca Nazionale Vittorio Emanuele III, Ms XII.E.4, 24v. Cf. Baldriga, *L'occhio delle lince*, cit., pp. 13-15 and 259.

⁴⁷ Gabrieli, *Il carteggio linceo*, cit., no. 24, pp. 67-68, n. 1; F. Tognoni, 'Nature Described: Fabio Colonna and Natural History Illustration', in: *Nuncius*, 20, 2 (2005), pp. 347-370; F. Solinas, 'Cassiano dal Pozzo Linceo e alcuni fogli del Museo cartaceo', in: S. Brevaglieri, L. Guerrini & F. Solinas (eds.), *Sul Tesoro Messicano & su alcuni disegni del Museo Cartaceo di Cassiano dal Pozzo*, Roma, Edizione dell'Elefante, 2007, p. 126; F. Solinas, 'Osservazione della Natura e "Pittura filosofica" nella Roma dei primi Lincei', in: *Il cannocchiale e il pennello: Nuova scienza e nuova arte nell'età di Galileo* (exh. cat. Pisa, Palazzo Blu, May 9-July 19, 2009), Firenze, Giunti, pp. 231-232.

⁴⁸ G. Baglione, *Le vite de' pittori, scultori et architetti: dal pontificato di Gregorio XIII del 1572. In fino a' tempi di Papa Urbano Ottavo nel 1642*, Jacob Hess & Herwarth Röttgen (eds.), Città del Vaticano, Biblioteca Apostolica Vaticana, 1995, p. 395: 'Come anche sono opera di sua [Isabella's] mano gl'intagli nel Libro dell'herbe del Principe Cesi d'Acquasparta, letteratissimo Signore. Fece altro cose per particolari. Et alli lavori, a quali mancò Isabella, supplì Gio. Giorgio Nuvolstella con le fatiche del suo intaglio.' See also Baldriga, *L'occhio delle lince*, cit., pp. 257-258.

⁴⁹ Arch. Linc. 4, 372r-v. The previous sheet (Arch. Linc. 4, 371r) also concerns Nuvolostella's work for Cesi. It contains various entries, the first of which is similar to the contract on the following page, only much shorter. It states that the artist arrived in Acquasparta on July 20, 1618 to make the woodcuts for the figures of the animals for the 'Mexican book'.

⁵⁰ See for the distinction between generic illustrations and epistemic images in early modern scientific treatises S. Kusukawa, 'Illustrating Nature', in: M. Frasca-Spada & N. Jardine (eds.), *Books and the Sciences in History*, Cambridge, Cambridge University Press, 2000, pp. 99-100.

illustrations and precluded indulging in aesthetic considerations or the expression of artistic individuality.⁵¹

Furthermore, the limited resources available for such a large graphic production determined the choice of both the medium and the artists who produced them. Woodcuts were cheaper than, for instance, copper engravings, but also made for cruder and less detailed images. For this reason scholars have judged the illustrations in the *Tesoro* to be somewhat disappointing.⁵² From an artistic point of view, they are right. However, in the early modern period the woodcut technique was often preferred in botanical and natural historical treatises, precisely because it forced the artist to represent only the essential and universalized features of a species and to refrain from producing faithful copies of individual specimens with all their details and defects, which would hinder rather than aid identification and classification.⁵³

The artists involved were obviously able professionals, but probably no accomplished masters, who had carried out large, public commissions. This is shown not only by the illustrations themselves but also to by Nuvolostella's contract, mentioned above. The artist was paid a fixed price for each woodcut he completed. Although contemporaries would have conceived this as better, in terms of social standing, than being paid per day (as journeymen), it was not what most ambitious artists were looking for, namely a fixed court salary, in addition to payments for their works.

The Lincean graphic production for the *Tesoro* required access to artistic circles and familiarity with artistic practices. In other words, it required a network that included visual artists. In seventeenth-century Italy, such a patronage network could be forged and cultivated in literary and art academies, as well as in the palaces of high prelates. The Accademia di San Luca and Cardinal Francesco Maria del Monte's Palazzo Madama were important sites for the Lincei in this respect. The Accademia di San Luca was the Roman art academy, which was sanctioned by Gregory XIII and Sixtus V in 1577 and 1588, respectively, but it started its educational activities around 1593. It was the successor to the guild and confraternity of the artists in Rome and it continued to carry out corporative and assistential functions, e.g. the protection and control of the profession through a system of rules concerning workshops, appraisals, and the art market.⁵⁴

Different types of artists and artisans were involved in the Accademia di San Luca. Moreover, the academic meetings and drawing sessions were also open to gentlemen and amateurs, which enabled the artists to come into contact with potential patrons.⁵⁵ Relevant in this context is that documents in the archive of the art academy show that in 1627 and 1629 Cassiano dal Pozzo attended meetings in which the candidates for the presidency of the institution were discussed. Dal Pozzo was there as representative of Cardinal Francesco Barberini, who at that time was the protector of both the Accademia dei Lincei and the Accademia di San Luca.⁵⁶

⁵¹ Freedberg, *The Eye of the Lynx*, cit., p. 257.

⁵² *Ivi*, pp. 257 and 271. See also J.M. López Piñero & J. Pardo-Tomás, *Nuevos materiales y noticias sobre la historia de las plantas de nueva España de Francisco Hernández*, Cuadernos Valencianos de historia de la medicina y de la ciencia XLIV, Serie A (Monografías), Valencia, Instituto de estudios documentales e históricos sobre la ciencia Universitat de Valencia-C.S.I.C., 1994, p. 85.

⁵³ L. Daston, 'Observation', in: S. Dackerman (ed.), *Prints and the Pursuit of Knowledge in Early Modern Europe*, Cambridge (MA), Harvard Art Museums / New Haven-London, Yale University Press, 2011, p. 128; S. Kusakawa, 'Drawing as an Instrument of Knowledge', in: A. Payne (ed.), *Vision and Its Instruments: art, science, and technology in early modern Europe*, University Park, Pennsylvania University Press, 2015, pp. 36-48.

⁵⁴ Jonker, 'The Academization of Art', cit., pp. 207-236.

⁵⁵ *Ivi*, pp. 407-416.

⁵⁶ Archivio di Stato di Roma (ASR), TNC, uff. 15, 1627, pt. IV, vol. 114, fols. 257r-v, 272r and ASR, TNC, uff. 15, 1629, pt. 4, vol. 122, fols. 835r-v. During the latter meeting Dal Pozzo voiced Barberini's desire

Between 1595-1626 the position of cardinal protector of the Accademia di San Luca had been fulfilled by Cardinal Del Monte. This overlaps with the period that Dal Pozzo was part of Del Monte's household and also with his entry in the Accademia dei Lincei. Thus, Dal Pozzo would not only have had the opportunity to meet artists for the Lincean projects (as well as for his own) in the Accademia di San Luca, but also in Del Monte's house, Palazzo Madama, where its owner had created an extensive library, collections of antiquities, prints and drawings, galleries of paintings, and cabinets of curiosities. It also contained lodgings and studios for practicing artists such as Caravaggio. The open character of the palace made it a site where scholars, scientists, writers, and visual artists met and conversed with potential patrons.⁵⁷ Cesi and Faber were among the naturalists who frequented Palazzo Madama.⁵⁸

Publishing practices: privilege and *imprimatur*

The main goal of publication practices was the publication of books, pamphlets, treatises, etc. As with works of art, the content and appearance of these products depended on the other practices in which they were supposed to function, e.g. scientific, leisure, religious. Publishing in seventeenth-century Europe meant navigating a manifold of administrative offices, negotiating with ecclesiastical censors, assessing foreign markets, and obtaining a privilege for each of these markets.

The *privilegio* ('privilege') was a protection against plagiarism and theft, granted by the government, i.e. a kind of copyright protection. As mentioned, the Lincei obtained a papal privilege from Paul V as early as 1612. They managed to do so through Faber's and Terrentius's friendship with the Secretary of the Apostolic Briefs, Cardinal Scipione Cobelluzzi (1564-1626), with whom they shared naturalistic interests.⁵⁹ The legal validity of the privilege had to be guaranteed by the *imprimatur*, i.e. an official declaration by a Church authority, placed at the beginning of a printed book, stating that it might be published.⁶⁰

In Rome, obtaining an *imprimatur* meant that it had been approved by the censor or *revisore* of the Master of the Sacred Palace, who had to verify whether the content of a book was conform the tenets of the Catholic faith and morality.⁶¹ Unlike what is commonly assumed, this was a relatively informal practice, in which laymen and Church officials negotiated directly – albeit often implicitly – with one another about the publication of books. Often they had the same interests and could even reverse positions in this process, as university professors were frequently asked to function as censor when there were no ecclesiastic censors available with the relevant expertise, and prelates also had to pass the censor in order to get their books published.⁶² For instance, Faber regularly functioned as reviser.⁶³

Another case in point are Faber's negotiations with the Polish Dominican reviser of the Sacred Palace Abramo Bzovio. At the time when the Lincei were trying to obtain the *imprimatur* for the *Animalia mexicana* in 1628, Bzovio was looking for a patron for his book on Silvester II (r. 999-1003). According to Bzovio, Cesi was the perfect

that Gian Lorenzo Bernini be the president of the academy in the following year, instead of Domenichino. The academicians, indeed, complied with their patron's wish.

⁵⁷ Z. Wazbiński, *Il cardinal Francesco Maria del Monte, 1549-1626. Mecenate di artisti, consigliere di politici e di sovrani*, 2 vols., Firenze, Leo Olschki, 1994. See also Findlen, 'Cassiano dal Pozzo', cit., pp. 24-25.

⁵⁸ De Renzi, 'Medical competence', cit., p. 558.

⁵⁹ Brevaglieri, 'Il Cantiere del Tesoro Messicano tra Roma e l'Europa', cit., p. 49

⁶⁰ *Ivi*, p. 51.

⁶¹ *Ivi*, pp. 44-46; C.L.C.E. Witcombe, *Copyright in the Renaissance: Prints and the Privilegio in Sixteenth-Century Venice and Rome*, Leiden, Brill, 2004.

⁶² Brevaglieri, 'Science, Books and Censorship', cit., pp. 140-143.

⁶³ *Ivi*, p. 155.

candidate to fulfill this function because his family was allegedly related to this pope. With the help of Faber's brokerage Bzovio, indeed, obtained Cesi's patronage and the book was printed in 1629. In return, the reviser not only approved of the *Animalia mexicana*, but also praised the book for its originality and medicinal usefulness in the *imprimatur*. According to Faber, this favorable judgment from the reviser made the book more marketable ('vendibile').⁶⁴

The printing privileges included in the copy of the *Tesoro* in the archive of the Lincei also emphasize the medicinal value of the book.⁶⁵ This copy contains four printing privileges dating from 1623-1627. The first is a privilege from Emperor Ferdinand II in 1623 that was obtained with the help of Faber's network in northern Europe, especially with the help of Cardinal Hohenzollern-Sigmaringen.⁶⁶ The privilege from the French king, Louis XIII, in 1626 was secured by Dal Pozzo whilst participating in Francesco Barberini's diplomatic mission in 1625.⁶⁷ Third, the privilege from the grand duke of Tuscany, Ferdinando II, from 1627, was obtained by Dal Pozzo through his Medici background.

Finally, in 1627 the Lincei also obtained a papal privilege from Urban VIII. Cardinal nephew Francesco Barberini's role – halfway between a member and a patron of the academy – must have been most important in this respect, but also Cesi, Dal Pozzo, and Faber stood in close contact with the relevant authorities for obtaining this privilege. The presentation copies of the *Libellus* for Maffeo Barberini and Bishop Aschhausen in 1613 and the *Animalia mexicana* for several high prelates from 1628 should be understood in the light of securing these privileges.

Publication at last: converging and diverging practices

On 20 February 1649, Dal Pozzo wrote a letter to his friend Nicholas Heinsius in Leiden with good news. Together with Stelluti he had managed to find a new patron for the *Tesoro* in Alfonso de las Torres, a Spanish nobleman and commercial agent for King Philip IV in Rome. De las Torres bought the 1400 remaining copies that had been printed in the 1620s by Mascardi in Rome and awaited publication ever since. He had paid for their binding, a new frontispiece, and the printing of the *Liber unicus*.⁶⁸ In his letter Dal Pozzo asked Heinsius to inform Johannes de Laet about the upcoming publication, which would satisfy the latter's desire expressed thirteen years earlier in his letter to Holstein.⁶⁹ Between 1649 and 1651 slightly different editions of the *Tesoro* were, indeed, finally brought on the market.

With the help of the practice approach adopted in this article it has been possible to simultaneously arrive at a more comprehensive and a more detailed understanding of the compilation and publication process of the *Tesoro* by the Accademia dei Lincei than has hitherto been given. It is more comprehensive, because it discusses four relevant practices instead of only one or two; it is more detailed because it shows how these practices were interrelated, i.e. how they overlapped or conflicted with each other. From this perspective, social life is conceived of as an overlapping web of

⁶⁴ *Ivi*, p. 142.

⁶⁵ Freedberg, *The Eye of the Lynx*, cit., p. 271.

⁶⁶ Brevaglieri, 'Il Cantiere del *Tesoro Messicano* tra Roma e l'Europa', cit., pp. 48-49.

⁶⁷ Findlen, 'Cassiano dal Pozzo', cit., p. 32.

⁶⁸ The *Liber unicus* is a transcription of one of the parts about the animals and minerals from Hernández's manuscript that had not been included by Recchi in his compendium. It is appended to some of the copies of the *Tesoro* with a separate pagination, attesting to its later date of printing. Marini Bettòlo, 'Guida alla lettura del *Tesoro messicano*', cit., pp. 25, 29 and 45; Guerrini, 'The "Accademia dei Lincei"', cit., p. 2; Findlen, 'Cassiano dal Pozzo', cit., pp. 34-35.

⁶⁹ Gabrieli, *Il carteggio linceo*, cit., no. 1042, p. 1248 (Dal Pozzo to Heinsius, 20 February 1649): 'Del libro delle cose del Messico, del quale mandai il titolo, perchè V.S. lo desse al Sig. Giov. Laet'; cfr. Freedberg, *The Eye of the Lynx*, cit., pp. 267-268.

practices that can be identified and distinguished from each other by focusing on the goals, skills, and rules that interconnect the doings and sayings within each practice. The convergence and divergence of the goals, skills and rules of the four practices discussed deepens our understanding of the *Tesoro's* relative failure (delays, lack of overall structure in the book) and success (final publication, wealth of visual and textual knowledge of plants and animals from the New World). Moreover, it does so from a perspective beyond the traditional model that ultimately reduces social or cultural life to (features of) individuals.⁷⁰ In other words, the overlaps and conflicts are not reduced to desires and ideas of individual actors but, conversely, these personal features are to be understood from the perspective of the cultural practices in which the actors participated.

With regard to the overlap of the practices discussed, the production of highly specialized cultural artifacts was a central goal in all four practices, albeit for slightly different reasons (e.g. in order to establish a patronage network in patronage practices, or in order to make a living in artistic and publication practices). As far as skills were concerned, the ability to negotiate was important in both patronage and publication practices; knowing how to use the printing press in both artistic and publication practices; and making graphic representations of plants and animals in both artistic and scientific practices. The overlaps were conducive to the realization of the project, as the Lincei could participate in different practices at once (e.g. Faber in the deployment of his negotiation skills).

Although the skills required from the artists employed by the Lincei overlapped with those required from other artists, they were not identical, which shows that they participated in different practices. For instance, like other artists they had to know how to draw, make woodcuts, and observe nature. However, they had less freedom than in most other practices – and they might, therefore, be seen as artisans rather than artists. In producing the images for the *Tesoro* they had to represent the specimens in front of them simultaneously very accurately and in an abstracted fashion. In this way they would produce a universalized representation of a species, rather than an exact copy of an individual specimen. Since most artists would probably not have had enough experience with plants (and animals) to distinguish the essential from the accidental features, the Lincei closely scrutinized them. For this reason, the production of the hundreds of woodcut images for the *Tesoro* was a laborious and time-consuming process. The goals of the practice also determined the type of artist employed by the Lincei: a capable but uninventive master, as is suggested by Nuvolostella's contract.

The divergences between the practices discussed were also related to the goals pursued by the participants, e.g. the acquisition and dissemination of knowledge in scientific practices versus the production of luxury artifacts to establish and maintain a network in patronage practices. Although not completely antithetical to the work on the *Tesoro*, the printing of the *Libellus* and *Animalia mexicana* as separate editions was time-consuming – it required for example the selection and production of different bindings for different patrons – and, thus, distracted the Lincei from their scientific work.

This last example shows that the goals of cultural practices are organized hierarchically and also that in different practices the hierarchies can be reversed. For instance, one of the main goals of the scientific practices in which the Lincei were involved was the acquisition of knowledge, whereas the production of (artistic) images and the maintenance of a patronage network were secondary goals, insofar as these

⁷⁰ The practice approach taken in this article not only moves beyond this traditional model that focuses on individual agency, but also on the model that is usually opposed to it, i.e. the one that highlights supra-individual structures (structuralism).

were pursued in order to achieve the main goal. From the point of view of artistic, publication and patronage practices, however, the acquisition of knowledge was a secondary goal, insofar as it functioned as “content” to realize the main goal, i.e. the production of images and books, and the maintenance of a network, respectively.

From a methodological point of view, the adoption of this practice approach to the case of the network and practices of the Lincei can be seen as a next step in developments in the historiography of culture that have been underway for several decades. The specific focus on goals, skills, and rules as constituting elements of cultural practices allows for more systematic and detailed interpretations of historical culture than the loose application of terms as “practice” and “network”, e.g. by showing how similar skills could belong to different practices.

However, the practice approach advocated here also poses challenges. In the first place, the interpretation in this article has focused more on the goals and skills of the practices than on the rules involved.⁷¹ This attests to the fact that, generally, rules made explicit only when participants disagree with each other about the future of the practice or in the training of neophytes. This means that in historiographical research – i.e. where participants can no longer be directly questioned – there will probably be more to say about the goals and skills that organize the practices.

Furthermore, the intrinsically fluent and overlapping nature of social life makes the demarcation of practices an empirical and contestable undertaking. For instance, scholars could disagree on whether the convergence of goals and skills means that we are dealing with a single practice rather than partially overlapping ones. This is complicated even further by the development of practices themselves: the goals, skills and rules do not remain the same over time, as the developments in the sciences in the early modern period make clear.

A related issue has to do with the question of completeness. Often, in the explanation of complex phenomena and events many practices were involved. In the case at hand, religious practices could be an additional context from which to understand the *Tesoro*. For instance, the Lincei had to be aware of the rules of Christian faith and morality for obtaining the *imprimatur*, at least enough in order to know how to bend them.

Besides the addition of other practices, future research on the *Tesoro* from a practice theoretical perspective could focus more on the material aspects of the compilation process. How did the material features of the sites in which the book was produced – Cesi’s palaces in Rome and Acquasparta (which included two botanical gardens and a laboratory),⁷² the library of the Neapolitan branch of the academy, and Corvino’s garden – and the objects and artifacts within them, contribute to (or hinder) the compilation of the *Tesoro*? This implies a shift in focus from solely analyzing the social aspects of the compilation and publishing process (network analysis) to also including the material aspects in the analysis (practice approach).⁷³

The gardens and hospitals in Mexico, where Hernández carried out his research and analysed his material with the help of native ‘scientists’ and ‘artists’, should also be included among the sites to be studied. This opens a more critical research line than has hitherto been adopted. Philip II’s motives for sponsoring an expensive scientific expedition to Mexico included demographic and work force control, since

⁷¹ The rules discussed are those of gift-giving in patronage practices, the guild rules of the Accademia di San Luca, those prescribed for the Accademia dei Lincei by Cesi in his *Lynceographum*, and the tenets of Christian faith and morality in publication practices.

⁷² Giurleo, *I Cesi*, cit., p. 132.

⁷³ See for this distinction, D. W. Chambers & R. Gillespie, ‘Locality in the History of Science: Colonial Science, Technoscience, and Indigenous Knowledge’, in: *Osiris*, 15, *Nature and Empire: Science and the Colonial Enterprise* (2000), pp. 221-240.

having a healthy population was imperative for a successful colonial enterprise.⁷⁴ This is a consideration that deserves more exploration, not only with respect to the Spanish king and the colonial administration, but also concerning the motives for, and consequences of the publication of the *Tesoro* by the Lincei. For instance, in his commentary on the *Picus Americanus* Faber implicitly justifies the evangelization of the New World, arguing that the devil has migrated there after he was banned from Europe due to the victory of the true religion.⁷⁵ How did the *Tesoro* contribute to the Europeanization of indigenous knowledge and the legitimation of the colonial enterprise? The answers to these questions should include more attention for colonial power structures in the circulation and transformation of knowledge in transatlantic networks.

Key words

Accademia dei Lincei, patronage, networks, *Tesoro messicano*, cultural practices

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⁷⁴ J. Pardo Tomás, ‘¿Viajes de ida o de vuelta? La circulación de la obra de Francisco Hernández en México (1576-1672)’, in: M.E. Cadeddu & M. Guardo (eds.), *Il “Tesoro Messicano”: Libri e saperi tra Europa e Nuovo Mondo*, cit., p. 66.

⁷⁵ *Tesoro*, p. 704. De Renzi, ‘Writing and Talking’, cit., p. 158.

RIASSUNTO

Reti e pratiche dell'Accademia dei Lincei nella pubblicazione del *Tesoro messicano*

L'Accademia dei Lincei fu una delle prime istituzioni scientifiche moderne. Il progetto più ambizioso dell'accademia fu la pubblicazione del *Tesoro messicano*, un esteso compendio sulla storia naturale del Messico, sul quale i Lincei lavorarono tra il 1611 e il 1651 basandosi sui manoscritti del medico del re di Spagna, Francisco Hernández. La pubblicazione di un trattato scientifico come il *Tesoro* nel Seicento a Roma richiedeva la mobilitazione di un ampio *network*. Questo articolo si concentra sulle quattro principali "pratiche culturali" con le quali i Lincei realizzarono questo libro – pratiche di patronato, scienza, arte e pubblicazione, mostrando in quale misura queste pratiche fossero collegate.

I Lincei plasmavano e coltivavano un *network* di patronato attraverso la donazione a diversi prelati di libri contenenti immagini delle piante descritte nel *Tesoro* e con un estratto relativo agli animali messicani. Successivamente essi utilizzavano lo stesso *network* di patronato per verificare le descrizioni dei manoscritti, per entrare in contatto con gli artisti che avrebbero dovuto creare le illustrazioni e per ottenere i privilegi e l'*imprematum*, necessari per la pubblicazione del *Tesoro* a Roma. La ricostruzione di queste pratiche dovrà portare a una conoscenza più completa sia del progetto del *Tesoro* che dei motivi per il ritardo della pubblicazione.