

85. See note 27 above.

86. For example, Vittori 1640, no. 11, pp. 36–37 (seasickness); no. 24, pp. 85–86, “An idem homo possit esse in quibusdam sapiens, in aliis vero insipiens”; no. 81, pp. 287–299 (Hippocrates and pulse).

87. For example, Vittori 1640, no. 15, pp. 48–52.

88. Vittori 1640, no. 70, pp. 240–254, “Historia iuvenis extincti variolis notata ab auctore dum medicinam faceret sub disciplina Alexander Petronii, ubi et describitur, ratio curandi variolas, et exemplar observandi progressum morborum accurate proponitur.”

89. Schenck 1584, Proemium; see POMATA in this volume, 134. I owe this reference to Gianna Pomata.

90. Vittori 1640, no. 82, pp. 299–379, “Ad medicum, qui assumpto gradu doctoratus, erat in patriam reversurus. Ubi diffuse ostenditur via qua iuveni arte medica instructo ad illam exercendam progrediendum sit.”

91. Vittori 1640, 299: “Scientiae in nostra mente sint velut tibia in manu tibicinis: quare sicut nesciens modulari . . . inutiliter tibiam possideret.”

92. Vittori 1640, 316–327.

93. Vittori 1640, 342, “Quid agendum cum domum redieris.”

94. Vittori 1640, no. 32, p. 103, and no. 74, p. 264.

95. The section on miracles is placed at the end of the volume, with its own brief introduction (Vittori 1640, 380–381). *Consultationes* nos. 83–97, pp. 381–449, and 98, pp. 443–449, concern miracles of healing attributed to intercession of saints (83–87, Loyola; 88–94, Xavier; 95–97, Neri; 98, Diego). The treatise on Neri’s autopsy, not numbered among the *consultationes*, occupies 415–443.

96. Two of the miracles attributed to Loyola that are discussed by Vittori correspond to those included in the canonization process. Compare Vittori 1640, 387–388, no. 85, with *Acta Sanctorum Julii* 1731, 617, no. 1086 (Magdalena Talavera/Valavera) and *Relatio* 1644, 39, no. 4, cure dated 1601; and Vittori 1640, 390–391, no. 87, with *Acta Sanctorum Julii* 1731, 617, no. 1083 (Isabella Rebelles) and *Relatio* 1644, 35, no. 1, cure dated 1564. These cures presumably occurred in Barcelona and Gandia (Valencia), the places with which the women are identified.

97. His procedure seems to have been very similar to that of Paolo Zacchia, who also gave testimony both in secular legal cases involving accusations of murder and in canonization processes. See the *consilia* and *responsa* included in Zacchia 1651, book 9, nos. 1–10, pp. 659–680 (miracles), and nos. 12–16, pp. 682–692 (criminal cases).

98. In addition to those from Spain mentioned in note 96, Vittori also discussed miracles reported to have taken place at Malacca at the time when the body of St. Francis Xavier (d. 1552) briefly rested there and at Goa, where he is entombed.

11

Description Terminable and Interminable: Looking at the Past, Nature, and Peoples in Peiresc’s Archive

Peter N. Miller

The pages of Peiresc’s archive that are not copied out from documents, nor sent to or received from other people, take the form of descriptions. And description can be very tedious. Nevertheless, much early modern historical scholarship takes the form of description. On our side of the divide, we know *and feel* that just telling what happened, or just describing what has been seen or discovered, is inadequate, ever exposed to the devastating “So what?” question. “Historians” have come to think of themselves as storytellers, with a beginning, a middle, an end, and, above all, a point to their stories. “Antiquaries,” seemingly, did not. And yet, at the beginning of the seventeenth century, this mutual repulsion of history and description did not exist; in certain contexts *historia* actually meant description.

Historians of medicine, looking into the teaching and writing that emerged from the University of Padua at the beginning of the seventeenth century—Fabricius of Acquapendente, but also, as POMATA has shown in this volume, Aselli and Harvey—have shown that *historia* took the shape of a “description” of the parts of the whole (Galen) or of a particular person’s illness (Hippocrates). SIRAIISI, in this volume, has brilliantly followed up this insight, showing how the antiquarian revolution of the sixteenth century was taken up by doctors. The next step in this inquiry might be to suggest an impact of the medical revolution on antiquaries and antiquarian forms of historical scholarship—via description.

Nicolas-Claude Fabri de Peiresc (1580–1637) was a man who studied many, many things,¹ but he belongs to this particular story, too. For though he came to Padua to study law—in a long tradition of legal antiquarianism²—we know from Gassendi’s *vita* that he attended the lectures of Acquapendente and after returning to Provence continued to seek out

his publications. Indeed, Gassendi reports that when presented with Harvey's *De motu cordis*, Peiresc replied that he had heard bits of it from Acquapendente and that, anyway, it was Sarpi who had discovered the existence of valves.³ As Andrew Cunningham and Gianna Pomata have argued, here and elsewhere, Acquapendente was a crucial figure in promoting what we can consider a historical approach to medicine, reforming Aristotle in the light of Galenic and Hippocratic approaches to the observational and individuating character of medical cases.⁴ In Pomata's contribution to this volume, we see that the crucial taking-up of Fabricius's demarche was by Aselli and Harvey; Peiresc was devoted to both of them, repeating the former's anatomy on a convict at Aix in 1634 and so becoming the first to observe the lymphatics in human beings. This was one of the few accomplishments of his that was recognized by contemporaries or near contemporaries.⁵ Indeed, Peiresc's combination of admiration for Bacon and Harvey precisely aligns him with the intellectual prosopography of the early Royal Society.

His archive preserves working papers in fields we call anatomy, anthropology, archaeology, art history, astronomy, botany, epigraphy, glyptics, history, numismatics, paleontology, and zoology. Of course, neither he nor any of his colleagues knew of these terms. Their world of learning had different divisions. But if we look at these studies, some of which are finished (or almost finished) texts, others mere notes recorded in the midst of some activity, and which number in the thousands of pages, we find that they take the form of descriptions. These, supplemented by complementary passages drawn from his equally voluminous correspondence, serve as the material foundation for the present study. Peiresc's intellectual practice, and the fate of his work in the history of scholarship, is an exemplary case in the as yet unwritten history of learned description.

The most serious treatment of the meaning of description in early modern Europe has been written by an art historian, Svetlana Alpers. Though concerned to rehabilitate Dutch art, her observations can be profitably extended to the history of historiography. For the contrast she draws between an Italian art that appealed because it was both narrative and narrated the emotions of individuals (she even refers to Alberti's definition of *istoria*) and a Dutch art of mapping "places, not actions or events" effectively refracts Momigliano's famous distinction between the

diachronic ancient historian and the synchronic, protostructuralist antiquarian through the prism of description.⁶ Momigliano himself recognized that early modern antiquarianism had something in common with the New Science. In a very early essay of 1935 he used the term "empiricism" to refer to the antiquarian scholarship of G. B. Heyne, one of the pioneers of modern history at Göttingen. But by the 1960s his emphasis was on the antiskeptical character of close observation.⁷

By suggesting a cultural-historical connection between an artisanal culture and the New Science on the one hand, and a specific presentational format on the other, Alpers allows for the possibility that *ekphrasis*—verbal description of the visual—could be a mode common to both the natural and human sciences.⁸ If we look into the Peiresc archive, we find just that: "description" links the various continents of Peiresc's world of learning. It also reminds us how important words still were if one wanted to be as precise and detailed as possible.⁹ I would suggest that just as Martin Kemp has shown how Leonardo's intensely detailed but unfocused and then unknown anatomical drawings can be used to explore the antinomies of visual description in the Renaissance, so, too, an exploration of Peiresc's intensely detailed but unfocused and unknown ekphrastic technologies takes us into an antiquarian's study in the early seventeenth century.¹⁰

Carlo Ginzburg's swashbuckling "Ekphrasis and Quotation" argues that ancient orators and writers harnessed the authoritativeness of direct experience (autopsy) through a rhetorical use of vivid descriptions ("*enargheia* was the aim of *ekphrasis*") that aimed to convince their audiences of the truth of their account. Detail mattered because of the working presumption that the only way to know it was from actually being present. He even suggests that the rhetorical context—*evidentia* rather than evidence, in his terms—explains something of the gulf between Momigliano's historians and his antiquarians.

But even Ginzburg misses the power of "description." This is evident in his quotation of a striking passage from Manuel Chrysoloras's letter to the Emperor John VIII Palaeologus in 1411 (since quoted by others as well).¹¹ After describing the reliefs on the Arch of Constantine, Chrysoloras explained that "Herodotus and some other writers of history are thought to have done something of great value when they describe these things; but in these sculptures one can see all that existed

in those days among the different races, so that it is a complete and accurate history [*historian*]*—*or rather not a history so much [as] a direct experience [*autopsian*], so to speak, and presence [*parousian*] of everything that existed anywhere at that time.”¹² In a note, Ginzburg explains that he took the translation from Michael Baxandall, changing only the rendering of *autopsian**—*from “exhibition” to “direct experience”*—*and *parousian**—*from “manifestation” to “presence.” So far, so good. But, following Seifert and, more recently, POMATA in this volume, we would also want to change *historian*, too: to “description.” In which case, the full import of Chrysoloras is an even more striking statement of an antiquarian approach still alive and well in the age of Peiresc: history as description and direct examination of objects in order to make the past present.

Perhaps the most striking way to elucidate the centrality both of Peiresc’s practice of description and of description’s place in the New Science is to compare—briefly—Peiresc with Bacon.¹³ If we take the hint and look more closely into the third part of the *Instauratio magna*, which Bacon called “Natural and Experimental History,” we find much that Peiresc would have found immediately appealing. Not only do the topics of those “Particular Histories” converge closely with those of the descriptions found in Peiresc’s archive (up to 35 of Bacon’s 128 subjects are achieved by Peiresc), but the way Bacon tells the handful of histories he managed to write is followed closely by Peiresc.

When Bacon uses “history” in these experimental and natural histories it includes, for instance, names of winds, what people have said about them, when they blow, where they come from, and what they do to trees and plants.¹⁴ The connotations of “history” in the “History of Life and Death” are still more varied. They range from an account of the life span of plants and animals, to how animals live, to an account of how fire works to dry things (a process is described rather than an object), to particular instances of the process (in Germany, for example). The “history” of the longevity of humans begins with a collection of textual evidence. The history of “the operation of the spirits” is a description of how different kinds of spirits work in people and what they do to people. The history of the circulation of the blood not only tells how blood might move, but also facts relevant to circulation and heating. The

history of the “operation of the juices of the body” describes the structure, function, maintenance, and then the lived example of the thing.¹⁵ In the history of “Dense and Rare,” the history of “contraction and expansion” is expressed first in a table, or list, and then as a narrative of different experiments that produced expansion or contraction. Accounts of expansion in plants, liquids, gems, and trees—sometimes quite bizarre accounts, at that—are also offered as “history.”¹⁶

In these different instances the section on “history” is typically followed by one called “Major Observations” (*Observatio major/Observationes majores*). In other words, these “histories” were presented by Bacon as a preliminary stage of work in which the raw facts were made available for subsequent elaboration—just as *historia* was acknowledged a preliminary in anatomical exposition, at Padua and elsewhere. If we combine the emphasis on a simple factual style of description with the view that history’s purview includes the structure and workings of nature but not its purpose, then Peiresc might well have read the third part of the *Instauratio magna* as a manifesto for the Paduan natural history he was already familiar with. Indeed, Pecquet begins the sixth chapter of his book (following sixteen pages of discussion of Aselli and his immediate followers), in which he acknowledges Peiresc’s role as the discoverer of the lymph system in humans, by declaring, “Thus far, my reader, you have an exact history of the lacteal veins [*Ita (mi lector) habes exactam Lactearum Venarum historiam*].”¹⁷

The historiography of the New Science has of course been written in terms of “observation” rather than “description.” But observations lived—and live—only in their description. Description is how most early moderns learned of observations that were conducted elsewhere.¹⁸ And description may also have helped even those who were present remember what it was that they saw: there is at least a vestigial link between Peiresc’s organized preservation of labeled working notes and the (albeit less flexible) humanist commonplace book.¹⁹

Just as “observation” is usually studied by historians who connect it to the New Science, rather than to antiquities or anthropology, “experiment,” which is itself so closely linked to observation, typically excludes the human sciences—though it seems a good way of describing Peiresc’s testing the measurements of his different vases, to take just one example.

"Description" has, however, come to be very closely associated with the practice of experiment in the seventeenth century, especially in the work of Peter Dear.²⁰ As indicated by the specificity of a given description, experiment "was a single, historical occurrence, not a generalized statement. These things, we seem to be told, had happened by the action of or in the presence of a particular person, at a particular time and place." Dear wants to reserve this approach to the English.²¹

From this perspective, Peiresc would have to have been English. Even more: Dear's description of English, as opposed to Continental, Catholic natural philosophizing also makes sense of Peiresc's antiquarianism. "Boyle and his allies lacked such a framework, which is why they so frequently characterized their work as a Baconian collecting of facts—there was no clear way forward to making universal knowledge about the structure of nature."²²

The contrast between a Peiresc and a Descartes—to keep to Dear's dichotomy—can be captured in an anecdote. Peiresc's archive contains an attestation from several residents of Aix, including one "Peyron Isnard called Charet, the son of Chaillon," that they saw three suns in the sky the previous Lent (of 1629) though they could not remember the exact date or hour. Charet claimed to have often seen similar things, even to the number of three.²³ It was the same appearance of parhelia in Italy in 1629 that led Descartes's friends to ask for an explanation; he gave it in the form of his *Meteors*. It is worth also noting the difference in their approaches: Peiresc narrates the event with an emphasis on who saw what and when, while Descartes felt he had "to examine methodically [*par ordre*] all the Meteors."²⁴

It remains difficult to talk about description without doing it—to say that scholars described carefully, like saying that they compared many things together, seems meaningless. But the alternative, immersion in the details of a description, runs into the obstacle of a modern historical sensibility educated to be impatient with anything but interpretation. Peiresc and his friends had different priorities. After he first looked through Cornelius Drebbel's describing machine, the camera obscura, Constantijn Huyghens wrote that painting was dead, by comparison, "because this is life itself, or something even more elevated, if the words were not lacking [*car c'est icy la vie mesme, ou quelque chose de plus relevé, si la parole n'y manquoit*]."²⁵

The Past

As we are well aware, travel and description were intimately linked, at the level of theory as well as practice.²⁶ Peiresc himself, confronted with the fables of Vincent Leblanc, was forced—unusually—into a theoretical statement of his own. He insisted that Leblanc leave out all the far-fetched stuff, "ordering him to select and expresse after his own manner, what ever he found meerly historicall, and containing a credible narration of things . . . that it should be left to Philosophers to dispute those questions, and did not become a Relater to play the Dogmatist, especially contrary to the common opinion" and "that he should reap praise enough, sound and without spot, from the naked History [*nuda historia*] of his Travells."²⁷ Was description what Peiresc understood by "nuda historia"? Let us turn to two examples, drawn from his first two trips: to Italy and to northern France, the Low Countries, and England.

At the very beginning of his Italian trip of 1599, at the Camposanto in Pisa, Peiresc copied out a one-line inscription. It was followed by a 15-line *ekphrasis*:

In the middle of the picture of that tomb was seated a figure wearing a belt slung low, the rest being broken off. Above that figure there was another, very little, dressed in Greek style with a *pallium*. Behind this one was a woman *stolata*, with her hands outstretched between two trees that are probably laurels, on each of which there is a bird, which seems almost to be a *picus martias*. At the woman's feet is a sheep. One of those trees is on a mountain, opposite which is a naval anchor, with three rams above. Behind the tree on that same left side there is a peasant with a hat, who holds a pan in one hand and a fishing rod in the other, and pulls a fish from the water. Above the water there is a beardless head of Serapis, crowned with rays and a hat. To the right of the tomb there is the figure of a bearded man, seated with an instrument in his left hand, pointing with his right toward the tree, on which there is another bird like the others, and at the foot of the tree a ram who climbs up to this deity. Opposite the ram there is another figure—maybe of a shepherd, with a bare head, carrying another sheep on his shoulders.²⁸

There are drawings in Peiresc's own hand interspersed throughout the archive, and also two surviving volumes of drawings executed by artists at his behest. These contain bowls, vases, and sarcophagi, among other things. Almost immediately after his death scholars began picking through these materials looking for an ensemble of rarities (like

Montfaucon for gnostic gems, for example) or for pieces that filled out knowledge collected from elsewhere, or, more recently, for drawings of monuments that no longer exist.²⁹ And yet, in Peiresc's archive it is the word—and the verbal description—that dominates.

Travel itineraries, of which there are many different sorts in the archive, often contained descriptions, and some were even structured as a series of descriptions. Such was the memoir prepared by Peiresc for his sometime factotum Denis Guillemain, the prieur de Roumouilles, traveling to Angers in June 1609. Peiresc's precise instructions are telling: Guillemain was to discover and describe in writing whatever tombs could be located of the counts of Provence and dukes of Anjou. Second, he was to draw them in color or in pencil ("de faire faire en couleur, ou en crayon sur du papier de mesme grandeur que ceste feuille")—except for those that were already familiar. Third, "de marquer bien les lieux ou il en trouvera."³⁰

Peiresc's requests for investigation of the abbey church of St. Aubin of Angers were, if possible, even more particular. First, Guillemain was to do whatever possible (literally: "employer toute la faveur qu'il pourra avoir") to see the charters of Charlemagne containing the abbey's original privileges. Second, to note "the wax seals that are attached to the parchment of those charters, and try to recognize the letters written on them, and to see if the image is bearded or not, and if the crown is with flowers or not." Third, "to take care, very exactly, if among the wax seals there is any hair of a head or beard, as Jan du Boardigne wrote in his *Annals of Anjou*, ch. ix, and see if it is possible if any mention is made there that he had put the hairs of a beard in the wax or not."³¹ Fourth, to try to obtain permission to take an impression of the seal, as he had obtained from elsewhere. Fifth, to see if any other Carolingian charters existed—without wasting any time on the Capetians "car nous les avons tous." Sixth, to note the names of the keeper of the charters and the superior of the abbey, so that if they provided help, the favor could be returned at some point in the future.³² Finally, Peiresc reminded his agent just how these impressions were made: "Remember that these impressions are made by throwing molten sulfur onto an oily clay, which one had pressed onto the seal in question."

Peiresc was among the first to take the Middle Ages seriously. He collected Merovingian coins, explored churches, copied tomb inscriptions,

and did not judge worth on the standard of classical antiquity. We tend to think about Mabillon, Montfaucon, and Muratori as the pioneers of national medieval history, but early in the seventeenth century, and very much on his own, Peiresc began to assemble materials for a history of the monuments of the French monarchy. Hundreds of these notes and sketches survive, and they fill an entire register.³³ According to Gassendi, it was the project to defend France against the Habsburgs that put Peiresc in mind "from that time forwards, to think of an Edition of all Authors, especially those of that age, who had written the Antiquities and History of France."³⁴ But as early as 1609, in that memoir to Guillemain, we find Peiresc thinking about reproducing the visual evidence found on coins, seals, tombstones, and glass to produce an iconographic history of the kings of France.³⁵ Indeed, Peiresc has been placed in a line of early modern French scholars who created the study of the "Monuments de la Monarchie Française," though their ambition was only to be realized in the nineteenth century by the "Monumenta Germaniae Historica."³⁶

Peiresc would have been exposed to ecclesiastical antiquities in Italy, but his approach was his own. For example, from his reading in the history of religion he had come to think about the physical orientation of churches. First, he asked Selden whether the English churches faced more toward the equinox or the solstice. Then—though in fact we cannot be entirely sure of the chronology—he examined the churches of Paris. It turned out that the most ancient ones pointed at the sector of the circle between the equinox and the winter sunrise, St. Victor and St. Benoît excepted.³⁷ Peiresc did what in his own day might have been called an "experience": he had the royal mathematician, Jacques Alleaume, draw for him a compass, with Notre Dame at the center, and mark the points where the sun rose at the solstice and equinox. And, lo and behold, almost all the churches of Paris did, as he suspected, fall into this quadrant. The map survives and we can see that the exceptions were indeed St. Victor and St. Benoît "le betourné"³⁸ (fig. 11.1).

Peiresc visited and described the contents of many churches.³⁹ But he was not only looking and writing; he was also drawing both inscriptions and blazons.⁴⁰ Indeed, these rough drawings are usually embedded in the verbal descriptions in order to provide what Peiresc must have viewed as necessary clarity.⁴¹ Sometimes the images to be drawn were so

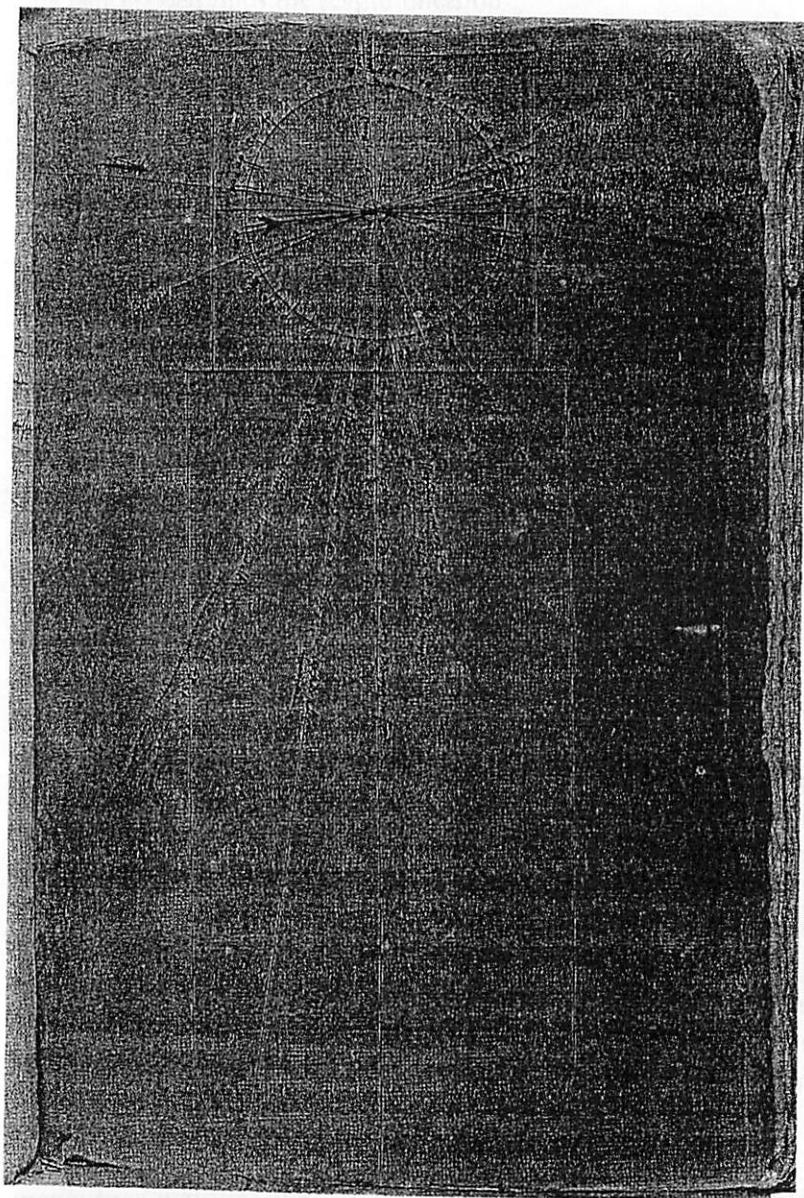


Figure 11.1
Bibliothèque Inguimbertaine, Carpentras, MS 1971, fol. 210: orientation of the churches of Paris relative to the position of the sun's rising between the equinox and winter solstice.

important—or so complicated—that Peiresc seems to have turned to “professional” draftsmen.⁴²

Paradoxically, the images that were most important for Peiresc, and the ones that were most frequently copied, were not of paintings or sculptures but rather the more “linguistic” ones associated with heraldry. These are treated as historical documents, and their description, whether in words or lines, is always detailed.⁴³ There are many notes that Peiresc made, always on site, that involved copying a tomb sculpture, describing it, and drawing its coat of arms.⁴⁴ When Peiresc moved beyond genealogical reconstruction he was less interested in an individual's perceptual universe than his cultural community—the enracination of heraldry in history.⁴⁵ This explains the attention that Peiresc, a student of medieval France, paid to these images. The precision—if not beauty—of his own sketches follows from this evidentiary role, just like his *ekphrasis* of the tapestry series in the “Salles des Gardes” (antechamber of the King) depicting the battle of Formigni won by the French over the English on 15 April 1451.⁴⁶ The tapestries described in “FIGURES DES ROYS EN LA SALE DU PALAIS” show Peiresc using the content of an image to guess at the use of its physical setting.⁴⁷ Similarly, an overfireplace painting becomes evidence for the shift from ambulatory to fixed sessions of government.⁴⁸

Men like Peiresc, or William Camden, Clarenceux king-of-arms, composed armories in the same way that they turned their classical learning inside out and composed poems in Greek or Latin. For, understanding how heraldic coats could be deconstructed to yield historical evidence, Peiresc was also in position to advise on the construction of new coats of arms. And, indeed, a document entitled 1624. *sigillum equestri ordinis Provinciae* puts Peiresc in the position of advisor to the Parlement of Provence, then seeking to draw up a great seal and a second for the syndics of the notables.⁴⁹ Much more interesting are the pages of notes in which Peiresc worked out the rationale for the different choices he had made in the process of heraldry. It is an instance of turning historical knowledge into an explicit and theoretically coherent visual code.⁵⁰

Church-as-museum was another key function. Peiresc carefully studied artifacts in the basilica of St. Denis and the Sainte Chapelle, both in Paris—in fact, as we have noted, his comments are deemed to be of such

importance that they are incorporated into the standard history of the basilican treasures.⁵¹ Some of Peiresc's most intense descriptions of jewels and cameos come from these churches. Alongside the verbal descriptions we find drawings in his own hand, as well as by artists, and also lists of jewels.⁵²

Peiresc was fascinated by Charlemagne in particular. In Peiresc's archives there are a series of wonderful drawings taken from the church of Notre Dame at Aix-la-Chapelle of Charlemagne, of his sarcophagus, and of the cupola mosaic that have been described as of "the highest worth."⁵³ There are inscriptions,⁵⁴ and there are discussions of charters that bear on the chronology of his reign.⁵⁵ There are even reports of conversations about his relationship to later rulers of France, like those Peiresc had with Bignon and Du Chesne about Hugh Capet.⁵⁶ But one of the most detailed descriptions focuses on a portrait head he viewed in the Louvre in 1621. "A marble head, about 800 years old, with the beard completely shaved . . . the hairs seem long on the head, and all the same in curls down the front and all around the scalp, making large bubbles of hair." Peiresc now compared it with other visual evidence, including seals and mosaics. What emerges is a comparative study of the image of Charlemagne, with especial attention to facial hair.⁵⁷

Now, why was Peiresc so especially interested in how Charlemagne looked? To answer this question, and to make sense of the impetus behind the document of 1621, we need to go backward and return to one of the most important epistolary relationships of his apprenticeship, with the Roman antiquary Lelio Pasqualini.⁵⁸ In these discussions of gems, with their extremely close attention to workmanship and depiction, we watch them moving from antiquarianism to the history of style.⁵⁹

It is in Peiresc's letter of 5 September 1605 that the appearance of Charlemagne is first discussed. He had found a coin of Louis the Pious that also portrayed a beardless Charlemagne, "just like yours," referred to in an earlier letter.⁶⁰ But it was not until November 1608 that the subject of Charlemagne assumed central importance in their correspondence. Peiresc's brother, Vallavez, was in Paris, but having some time free, Peiresc sent him to Aix-la-Chapelle, where he procured the drawings that are known to scholars.⁶¹ Peiresc, who had already raised the question of Carolingian coins as evidence, now asked Pasqualini for

everything he or his friends had that was "minted at the time of our French kings . . . of the first or second family."⁶²

Peiresc then turned directly to the question of Charlemagne. Interestingly, however, this extensive discussion was not actually sent to Pasqualini, but survives only in Peiresc's own draft of the letter.⁶³ Peiresc reported that Pasqualini's assertion of Charlemagne's beardlessness was challenged in other authors and especially in a special privilege that Charlemagne had conceded to the abbey of Angers in which his facial hair was included in the wax of his seal, for authenticity. Peiresc had not seen the hairs himself, but he had received word of this from a reliable person and had read it in the annals of the church, "in the second part, ninth chapter." This explains the careful questions about Charlemagne's charter that Peiresc had addressed to Guillemain, the prior of Roumouilles, in preparation for his trip to Angers in 1609, discussed above. "And I know this for certain," Peiresc added, "having myself seen similar hairs in some of his seals in the abbey of St. Denis." This had always seemed to him an annoyance, as it prevented him from making a good copy of the seal, "but now I no longer am of this opinion." He was certain, however, that no mention of the hair was to be found in the document "that you have observed so carefully."⁶⁴

From hairs and charters, Peiresc turned to the visual evidence. From the "legitimate," by which Peiresc no doubt meant "authentic," images of Charlemagne it was clear ("Basta si") that he had a beard, "not very long, really, but such that one could not say that he was beardless." Peiresc went beyond the evidence of coins. He was sending Pasqualini impressions of three seals he had taken from those in St. Denis. He compared these with mosaics made by Pope Leo III in the church of Santa Susanna and in the Sala Leonina at San Giovanni, and with a cameo preserved in St. Denis that, he boasted, "no one had noted before me." Moreover, official documents, capable of being dated very close to Charlemagne's own time—he noted that seals were then affixed directly to the parchment and did not depend from it, an innovation that came later—corresponded to the other images.⁶⁵

Even the fact that Pasqualini's coin of Charlemagne was of gold gave pause. Out of politeness or persuasion, his response steered clear of the question of its authenticity. But, ventriloquizing, he explained "by not having seen a gold coin of those princes, he believed Sr. Petau of the

Parlement of Paris, that that no coins were struck in that metal, and no gold money used in those centuries, but those of the Saracens, with Arab characters, basing his opinion on an author of that time, who describes payment in gold Arab money." This claim, which became a pillar of one of the twentieth century's great historical chestnuts, the "Pirenne thesis," is yet further evidence of the inventiveness of seventeenth-century antiquarians: using cross-cultural material evidence for establishing a medieval history. In this case, however, Peiresc was not prepared to go along, because he believed that all absolute rulers minted gold money whenever possible—the argument from principle—and because he possessed a gold coin very like Pasqualini's—the argument from collections.⁶⁶

Nature

Peiresc's Italian trip was the beginning of his serious investigation of nature, as it was of his serious study of the past. He met Galileo in Padua and the great luminaries of natural history, Ulisse Aldrovandi in Bologna and Giovanni Vincenzo Della Porta in Naples. In the north, he met Carolus Clusius. Peiresc corresponded with all these men.⁶⁷ Natural history and antiquarianism, coins and flowers, were talked about with the same people, in the same way. Clusius is an interesting example. The terms in which he approaches and discusses the history of flowers are exactly like those used by Peiresc for his antiquarian researches.⁶⁸ In fact, botany was an early interest of Peiresc's, stimulated by contact with Prospero Alpino at Padua, Richer de Berval at Montpellier, and Jean Robin in Paris.⁶⁹ In addition to Clusius,⁷⁰ Peiresc shared this passion with Jérôme de Winghe, with whom he also exchanged seeds.⁷¹

It is as a botanist and naturalist that Peiresc might appear most like his contemporaries.⁷² But once we start to look more closely at his verbal, rather than visual, descriptions, we begin to understand that language could be as precise a tool as the eye itself. Take the four-page essay on copulating slugs. "It was Friday 24 August 1635," Peiresc began, "that while walking to Trebeillane, I was invited to turn aside a bit from the path to see the austerity of the abbot and the situation of the hermitage of *St. Honoré de Roque Fauour*, in the territory of Ventabreu. We left the carriage at the passage across the River Arc and mounted on horse-

back, with Father Théophile Minuti of the Minims, Mr. Lombard and Sr. Balthasar Grange, and Perrot, my man, along with the guides." The hermit turned out to have been away, and did not leave the key to the church in any obvious place. Fortunately, there was an ill-secured wall and they were able to enter through it. Under the overhanging boughs of the large tree at the entry to the church there was a little cabana, and in it Mr. Lombard noticed two very large slugs spiraled together as if pear-shaped, attached to it by some sticky white substance. "After Mr. Lombard advised me of his discovery, I approached, and because the branch of that tree was not too high off the ground, to consider this marvel at my ease, I put a knee on the ground, and remained there a good half-hour, always more ravished in admiration, and more hard pressed to guess what it could be." Lombard wanted to cut them down and take them home, "which I absolutely forbade and similarly did not suffer anyone to touch them, so that with patience we might discover something more, without turning these animals away from their natural instinct, and without doing them any violence, which might disrupt their activity." So they all watched, carefully, the slow movements of the slugs, and the infinite number of smaller animals that crawled between them. "After, therefore, having for a long while considered this marvel, having brought my finger close to this 'pear' without however touching it, I saw leaving from the bottom, the two little horns of the slug." These were followed by two others, and then the animals began to uncoil themselves. Peiresc described their bodily motions and the possible sexual use of an organ. After this exciting description of slugs making love ("faire l'amour" was actually Peiresc's term) he turned to the more banal measuring of their uncoiled length and a description of color.⁷³ Seeing through Peiresc's words seems to offer incontrovertible proof for Lorraine Daston's attempt to put "attentiveness," or *Aufmerksamkeit*, at the center of the new scientific persona.⁷⁴

Peiresc, the master of looking closely, was also a student of looking. Of course, he would have been interested in optical effects because of his early exposure to the telescope. But in addition, as David Freedberg has noted, Peiresc was also at the forefront of microscopic research, obtaining microscopes for himself in 1622 and for Cesi in 1623.⁷⁵

It was only a decade later, however, that Peiresc put the eye at the center of his activities. In a letter written to the Dupuy brothers in Paris

at the end of 1633 he sought their help in obtaining a new, unspecified and still unknown recent book about optics.⁷⁶ In the spring of 1634, Peiresc was paid a visit by the nuncio, Giorgio Bolognetti, who found him at work dissecting the eyes of animals.⁷⁷ According to Gassendi, the ancients held that vision was in the "crystalline" humor, the moderns that it was in the retina, and Peiresc that it was in the vitreous humor.⁷⁸

Over the next year Peiresc pursued an experimental program in which extreme, unusual visual effects in a human (himself) were noted, and animal dissections were then performed to try to explain them.⁷⁹ Peiresc began with mirrors, of the sort used in microscopes and telescopes. These were the subject of a series of observations in the spring of 1634. "From Wednesday 19 April 1634 I observed and then showed M. Gassendi," begins one, which was also labeled for filing purposes "EFFECTS OF MIRRORS / and concave and convex glasses on the conversion of species of images."⁸⁰ He devoted a whole memoir to his observations of 21 April, labeled "EFFECTS OF MIRRORS in convex and concave DIAPHANOUS BODIES for the reception, reflection, amplification, diminution and reversal or reconversion of species of images."⁸¹

Peiresc was constantly attentive to the optical effects that he himself experienced. We possess a diary-like document, from the middle of the following month, May 1634, in which he describes the relative darkening or lightening of the window frame in his room depending on the background lighting and the position of his head relative to his body. These are notes taken as the effects were experienced. They are minutely descriptive. Friday 19 May: "After returning from church in the morning, awakening in my chair after a good quarter-hour's nap, and after looking at the window frame in my room, by chance and having refixed my view on the green portfolio that was on my knees, but so situated as to be a little in the shade of that window frame, I saw very clearly the image of that window frame get brighter, with its natural appearance of clear and dark." The next entry is for Sunday 21 May. The same "accident" occurred. The object seemed closer and there was left-right inversion. The image seemed to move as he moved his head. Saturday 27 May: "lying on my bed after dinner, for my colic," looking out toward his window, "I saw the same appearance of the frame, in both my eyes, each pitched up toward the nose so that if it were on paper

in would be like this, of the sort that one must examine and research the causes if possible." He then sketched on his paper the optical effect he was describing. Sunday 28 May: the same, this time after returning from mass and sitting in his usual chair after having taken "a little nap." And so on.

Peiresc conducted his exploration of these visual effects deliberately, opening and closing his eye repeatedly and noting the differences in what he saw. He also tried to imagine what it could all mean. "Nota," Peiresc added at the end: "It is necessary to examine the effects of vision when one places the head between the legs, and while one looks at a landscape from below, because when one looks upside down, it could serve as an explanation for the inversion of images which occurs at the back of our eye, and which seems (to our imagination) completely contrary to the natural situation of objects."⁸²

This "It is necessary" must have stayed with Peiresc. At the same time that he was conducting these experiments on what he saw, he was beginning to dissect the eyes of animals. His assumption was that the cause of an optical effect lay in some physiological fact. He did not turn to theory, but to experimental biology.

Gassendi described this project as naive—a rare public dissent from his friend's approach—and did not believe that anything substantial could be extracted from necessarily idiosyncratic personal experiences. It is worthwhile, at this point, to again recur to the Paduan medical tradition and to its English outgrowth. For Gassendi also remained skeptical of Harvey's assertion that repeated direct description—*historiae* in the anatomical sense—could ever add up to knowledge. Did his reaction to Peiresc's dissections reflect this same dissent? Even though Peiresc, unlike Harvey, never did attempt to offer a retrospective epistemological theory of description, could Gassendi's criticism of the limits of Peiresc's experimentalism reflect a discomfort with a similar sensibility?⁸³

Gassendi did, nevertheless, note that Peiresc's research program discovered many new, discrete facts about the eye.⁸⁴ Much of this would have come from the series of animal autopsies that began in earnest in August 1634. Indeed, we know that others in this circle thought much more highly of them. In the postscript of a letter to Gassendi in September 1634, Ismael Bouilliau wrote, "I saw at Mr. de Thou's, in the

hands of the Dupuy brothers, some pretty *mémoires* on anatomies of the eyes of fish and animals. I hope that you will discover for us some beautiful secrets of optics."⁸⁵ This refers to an extraordinary series of memoirs and notes, beginning from August, that records the handiwork of Sr. Cayre, "master surgeon and anatomist of this university," under the instruction of Peiresc. Eyes of cats, whales, owls, eagles, and various fish were cut open and examined.⁸⁶ Inside the owl's eye, Peiresc described what he thought he saw in minute detail—including the palace in Aix, right across from his window, but inverted, of course.⁸⁷

At the end of the month, Peiresc organized his thoughts on this matter and outlined a possible future course of research in a long memoir entitled "EXPERIMENTS ON THE EYES, both of natural mirrors and the effects of their reflection as of the comparison of the effects of LENSES and glasses convex, concave, and flat, and of phials filled with water, and of the doubling of images." For labeling purposes he was more terse: "1634. August 29 & 31./ NATURAL MIRRORS IN THE EYES." The main claim is presented right at the start: "We have seen from experience, first in the eye of a *lamia* and then in that of a dolphin, tuna, beef, sheep, and even that of a screech-owl, that at the back of the concavity, all clear of vitreous material, the *burning candle is painted* and represented *reversed, as in a concave mirror*."⁸⁸

Humbert has noted that this was the same discovery pointed out by Descartes in his *Dioptrique* (1637, but the work was done in 1629), though there is no indication that Peiresc knew of it, despite his close ties with Mersenne.⁸⁹ He also dismissed Peiresc's approach as "puerile"—a much less polite echo of Gassendi's acknowledgment that he had failed to persuade Peiresc that vision rested in the retina (the best he could do was to get Peiresc to agree that it was in no single part of the eye). Yet Kepler was himself "tortured" by the problem of the righting of inverted images on the retina.⁹⁰ And Peiresc was not the sort of person who could have been satisfied by Kepler's solution—declaring victory and leaving the problem of inversion unresolved.

Over the next months Peiresc was absorbed in animal dissection.⁹¹ Among the most detailed descriptions was one of a "monster" fished up off Marseilles on 9 May 1635, which none recognized and which he thought might belong to Rondelet's first type of whale.⁹² It had been caught, so Peiresc tells us, on Wednesday 9 May 1635 at 9 in the

morning, and its eye arrived at his home on the evening of Monday the 14th, brought by Messieurs Fort and Sabolini in a glass vial filled with "eau nittre"—they obviously had had dealings enough with local naturalists. But, Peiresc noted, by the time it had got to them there was already substantial decay. On the 16th Peiresc assembled his dissection team, led by Cayre the anatomist from Aix and observed by Gaultier, the Prieur de la Valette. They worked after dinner. There follows a description of how and where Cayre made his cuts and what the eye looked like and did at every stage. Peiresc must have been standing and writing while this was happening. The famous contemporary Dutch anatomies suggest something of the mixture of show and concentration that must have been happening in Peiresc's house in Aix.⁹³

At the end of January 1635 (24th–25th) Peiresc drew up a provisional balance of his research on "INVERSION OF IMAGES painted in our two eyes."⁹⁴ He returns to the reversal and/or multiplication of images that he had experienced himself in May of the previous year and then explored in the animal anatomies of the previous autumn. This part of the essay had been copied over in a fair hand; yet, as it typically decays into unfinished, imperfect observations, Peiresc adds yet another autobiographical fact to the existing heap. He describes lying in bed before dawn, balancing his portfolio on his lap and writing a letter on a folded piece of quarto paper on which he had left a substantial margin, and yet seeing writing in the margin when he experienced that same darkening of the window frame.⁹⁵

The way he proposed to work with this puzzle was, as ever, through further experimentation: "Dont il fault faire quelques experiences. . . ." Humbert, as we have noted above, was uncomfortable with Peiresc's long descriptions of particular, personal optical phenomena. But of course this misses the much more fundamental point: because Peiresc lived in a generation that turned so many received opinions on their head, he could never be sure which of these "puerile," quotidian events might turn out to be a decisive proof for something new. It comes as no surprise that in these papers Peiresc's refrain is always: "Il en faut reiterer l'experience."⁹⁶

Peiresc's close looking and close describing come together in his study of astronomy. His observation notes are extremely detailed and, especially for the study of the Jovian moons, are among the largest

surviving treasure troves for the early seventeenth century. His place in the history of astronomy was once more prominent than it since has become.⁹⁷ Appropriately enough for someone whose approach so seamlessly blends Bacon and Harvey, Peiresc's interest in astronomy began in Padua in 1600 when he met Galileo. Although their direct epistolary contact was sporadic in the years that followed, they seem to have stayed more or less in touch through intermediaries, especially Paolo Gualdo, in the intervening years.⁹⁸

We can date the beginning of Peiresc's own astronomical work to his contact with Galileo's *Sidereus nuncius*.⁹⁹ Over the next two years Peiresc amassed the largest surviving early modern archive devoted to Jupiter and its satellites. In its density of information and diversity of approaches it far surpasses the remains of Galileo's papers, which are mostly from a later date (probably late 1611 or early 1612). Those few who have worked on the surviving register of this material have been especially interested in documenting what Peiresc did and when he did it.¹⁰⁰ Some have concluded that Peiresc was a "better" astronomer than Galileo, others that he was a much worse one. But both miss the point, for the two men were seeking different things. And the difference between them turns, in fact, on the role of description.

Galileo was not interested in description—or, rather, he was interested in it only insofar as it was necessary to support his theoretical inquiry. For instance, the argument of the *Sidereus nuncius* is built on three months of observation, but the supporting material that survives is fairly scanty. Galileo gives the date and time, a visual display of the disposition of Jupiter and its satellites, and an indication of their distances in planetary diameters. Very rarely we find a note explaining some visual effect or unusual appearance of the objects in question. Overall the presentation is very similar to what appears in the *Sidereus nuncius* (1610): position, orientation, relative distance and luminosity of the Jovian system on a night-by-night basis.

The comparison with Peiresc's daily observation log is striking. Running for about forty folio pages, it records what Peiresc saw and what he thought of it, from 24 November 1610 to 17 April 1612 (fols. 189–227). The core, each night, is a visual representation of the disposition of Jupiter and its satellites—sometimes three and even four times in a night—but it is accompanied by a verbal description of the

observational conditions, a verbal description of what is seen, and sometimes also drawings and comments on other celestial phenomena.¹⁰¹ A comparison with what survives of Galileo's log for the same period covered by Peiresc's (roughly, 19 December 1610 through 14 June 1611, and again, though much more sporadically, from 20 November 1611 through 26 March 1612) makes plain the thickness of Peiresc's descriptions. Also, while Galileo keeps to what is narrowly relevant for his inquiry, Peiresc seems always to be keeping his eyes open for other things—there are descriptions of the appearance of the Moon, Venus (fol. 194r), Mars, Saturn (with its "cinctum" or belt, 196r, 210r), the conjunction of Mars, Jupiter, and Mercury, the motion and retrograde motion of Jupiter past the heart of Leo, and the nebula in Orion, which he saw during his first week of observing.¹⁰² But, above all, Peiresc's commitment to verbal description as a necessary *accompaniment* to visual description stands out on every page, starkly contrasting with Galileo's purely visual, or diagrammatic, presentation. Because of this density of description, which in fact only increased over time, where Galileo could get a whole month on a page of his log, Peiresc was barely getting six days on his (see, e.g., fol. 215v). Finally, ever aware of the technical limitations of the tools he used, Peiresc kept trying to acquire additional telescopes, and by the autumn of 1611 he had four of them. He recorded his observations using each of them in turn, all labeled, so as to indicate the range of possible distortions (from fol. 208; a discussion of the telescopes at 235r).

This information was recorded in real time. But Peiresc also went back and redescribed other, older observations. He was, in particular, either fascinated by or fixated on the first weeks of Galileo's observations as recorded in the *Sidereus nuncius*, and so we possess a whole series of drawings of Jupiter and its satellites. He began by recording, on a page titled *Maioris Planetae Medicei septem Absolutae circa Iovem circumvolutiones ex Galileo*, all the positions published by Galileo (66r). Then, working with Galileo's assumption that the angular diameter of Jupiter was equivalent to one minute of arc, Peiresc ruled "graph paper" and designated one box as equal to one diameter of Jupiter or one minute of arc. He arrayed the moons on either side of Jupiter in their precisely designated places and then mapped out the positions given by Galileo (66r–68r).

This makes for a much more precise picture of the Jovian system than Galileo had given. But then Peiresc went one step further: he began to draw in the orbits of the individual satellites. Galileo, it will be recalled, simply called the moons I-II-III-IV, and did not distinguish among them until some time at the end of 1610 or beginning of 1611. Tracing their positions meant understanding them as discrete bodies. Peiresc gave them names (Cosmus Maior, Cosmus Minor, Marie, and Catherine) and even prepared “commentaries” discussing their properties.¹⁰³ On the graphed paper he traced their orbits around Jupiter; sometimes only one, sometimes two, and sometimes as many as three at the same time (68r). Also, by doing this Peiresc was able to give the position of Jupiter’s moons even for nights when Galileo did not—and all for a time when Peiresc had not yet begun his own observations (fig. 11.2). How did he do this?

To solve this puzzle will take us to the heart of the different approaches of the two natural philosophers. Peiresc prepared computational tables for the four moons. Working backward from his calculation of the period of the moons, he calculated the “anomaly,” or the position of the satellites in their rotation around Jupiter, at many times per night for each night of an entire year. This table records not observation but reconstruction; not prognostication, but description. It is, as Bacon might have called it, *historia*.

Peiresc takes Galileo’s information about the time he did his observation and gives the equivalent time for Aix-en-Provence (i.e., the hour after sunset, given the different sunset times). Computation then allows him to give the position of the satellites in sexagesimal degrees, integer degrees, minutes, and seconds. He also gives the distance of the moon from the planet in units, and its direction (direct or retrograde, east of apogee, west of apogee, east of perigee, west of perigee). This amount of information allows for an extraordinary visualization.

Thus, not only does Peiresc now have the ability to see where Galileo had been blinded—say on 9 or 14 January—but to describe with such precision as to actually make it possible to determine the shape of the Jovian system at any point in the past, even when it had not been observed by human beings—as well as to project its orientation at some future time.

Working with his own observational notes, Peiresc proceeded to compute the position and direction of the four moons of Jupiter for every night between November 1610 and October 1611—sometimes at several

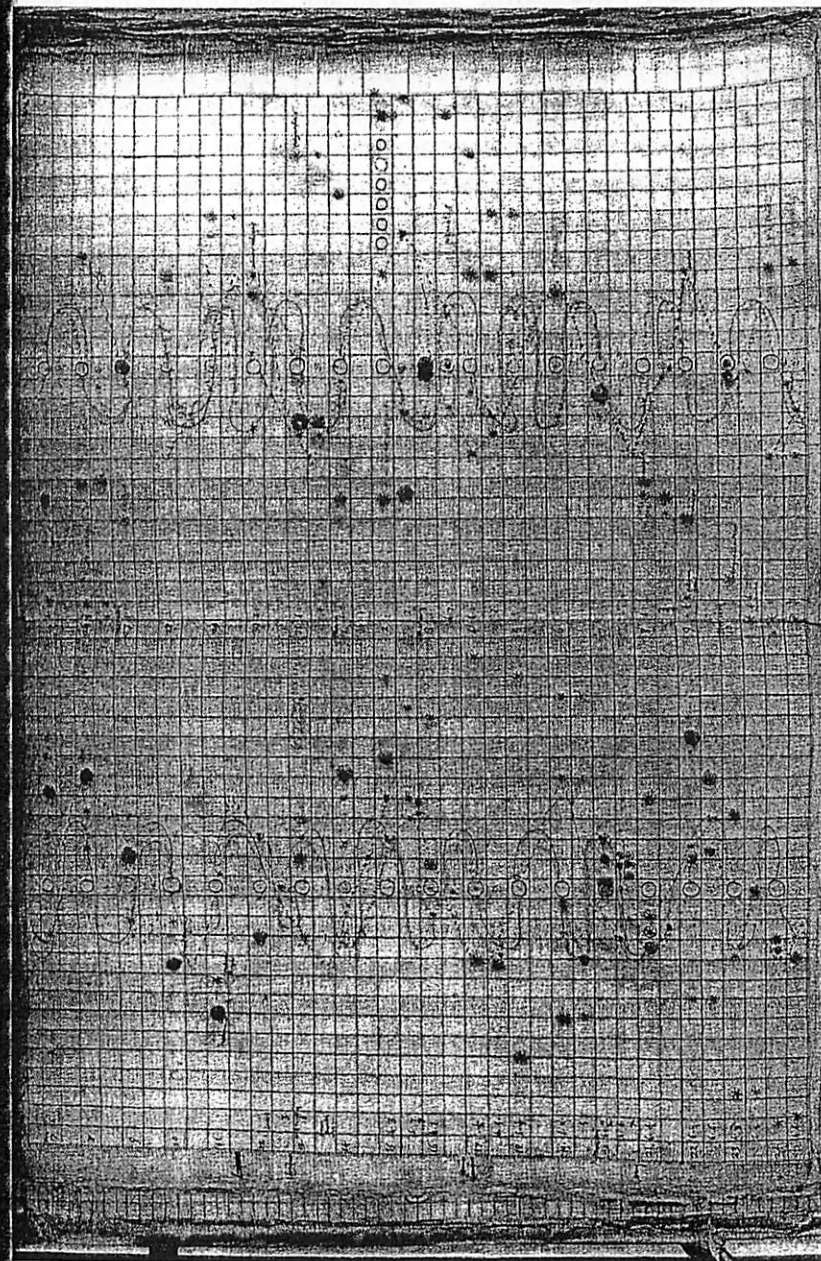


Figure 11.2
Bibliothèque Inguimbertaine, Carpentras, MS 1803, fols. 67v–68r: Peiresc’s sketch of the positions of Jupiter and its satellites, and their motions, for January–February 1610, the period of Galileo’s first observations.

different moments during the night (fols. 7–18). This is an absolutely remarkable amount of information. This description of the positions of Jupiter and its moons is no less an accomplishment than a historian reconstructing every moment of the past year's history of a particular subject. The "table" is, then, at one and the same time both a description *and* a history, for the competent user could "read" it and "see" the positions of the system as they changed over time. Moreover, one suspects that its termination in the fall of 1611 suggests a general terminus ad quem of Peiresc's project, even though observations continued through the first few months of 1612.

Galileo sought to discover certain laws of planetary motion and cosmology and with them to predict the future. This required a modicum of reconstruction in order to check the accuracy of his observations. Peiresc, by contrast, devoted much more attention to the retrospective aspect than the predictive, as if reconstructing the *past* life of Jupiter and its moons mattered more to him. We might think of this as Peiresc's "antiquarian astronomy." But at the same time, it needs to be distinguished from the textual recovery of antique astronomical authors and arguments that Kepler had termed, in his letter to Maestlin of February 1601, "philological."¹⁰⁴

When Peiresc returned to astronomy in the 1630s his eyesight was much weaker, but his descriptive powers even greater.¹⁰⁵ He now had the aid of Pierre Gassendi, a truly excellent astronomer. In fact, in the history of astronomy, the highlight of November 1631 was Gassendi's observation of the transit of Mercury. Peiresc in Provence and Gassendi in Paris had prepared for this event. It was another triumph of description over theory, since Mercury was far smaller than Kepler had predicted (because the solar system was actually much bigger).¹⁰⁶ But the more substantial evidence for his activities at the time is found in the extended log, devoted to sunspot observation, that began that same month and continued through January of 1632. It offers another opportunity to study his descriptive practice as an astronomer twenty years after those breakthrough observations of Jupiter's moons. The "log" takes the form of the day and date down the left side, the description of what was seen in the center, with the time of day at the right.¹⁰⁷ For each of the daily entries he also wrote out a paragraph or more of detail. A comparison again makes clear the scientific suppleness of verbal *ekphrasis*.

The powerful visual momentum of Peiresc's descriptions was fully realized in his project to map the moon. It is first mentioned, casually, in the postscript to a letter to Schikard of 4 September 1634. Peiresc noted that Gassendi was now working with two good painters in different locations to paint the phases of the moon, with all its specificity, using a telescope.¹⁰⁸

From Gassendi's astronomical diary we know that Mathieu Frédeau, a local artist who had worked with Peiresc on some zoological drawing, had executed a pastel of the full moon of 9–10 July. This was unsatisfactory, and another, even more obscure painter, Claude Saulvat, was brought in for the first time on 26 August 1634.¹⁰⁹ This was also a failure. It rained, and the next attempt was on 2 September. It rained on the 3rd, but on the 4th Saulvat painted with help from Gassendi and Gaultier. On 7 September there was a full moon but the skies were cloudy. They worked together on 8–12 September. They resumed work on 24 September, after the new moon, but the rain came, so no observing was done until the 30th. But the first week in October was cloudy again.

Then nothing. The project is not mentioned again until 3 March 1635, when Saulvat turned up with Gassendi at Peiresc's observatory for an eclipse and provided expert opinion on the moments when the shadow crossed certain parts of the moon. Only in August 1636, with the arrival of Claude Mellan on his way back from Rome, was the project of a selenography revived. Gassendi appeared on 16 September with Galileo's newly sent telescope. Mellan painted, in color, on 23, 24, and 25 September, but instead of putting his eye in the scope, he painted off the telescopic image projected onto paper. From 2 through 10 October Mellan worked with Gassendi each night save the 4th. We know that Mellan was also working on 13 and 14–16 October (around midnight), then on the 21st and 22nd (in the morning). Bad weather in November limited observation to the 2nd, 8th, 11th, 19th, and 22nd. After the new moon, observation picked up again on 30 November at twilight, then 1, 2, 5, and 7 December 1636. Then no more.¹¹⁰ Mellan was (back?) in Aix in April when he executed the charcoal sketch of Peiresc now in the Hermitage. Printing of the lunar atlas was interrupted—or truncated?—by the death of Peiresc in June.

The reception history of this project reflects on the fate of much of Peiresc's work.¹¹¹ In a letter to Cassiano Dal Pozzo of 2 June 1637 Peiresc

explained that Mellan had done only two phases because he was so disappointed in the low quality of the local printers; he was waiting to return to Paris to engrave ("scolpare") four or five other phases, in order to print them all together, since "the one without the other [is] not able to preserve the reputation of the work."¹¹² This now appears to have had the power of prediction. For if we turn to the most famous early mapping of the moon, executed by one of Gassendi's friends, Hevelius, only a decade after Peiresc's death, both the scale and detail of Peiresc's activities have been lost. Even though Gassendi gave him engravings of two phases, Hevelius writes as if there had been only one.¹¹³ Moreover, though one would have expected that Gassendi would have given a full oral history of the project, Hevelius writes that he learned of Peiresc's very small step forward through the *Vita Peireskii* alone. How far had Peiresc dropped out of the story? Hevelius notes that though it was not his preference, others had suggested to him to name lunar locations after modern astronomers: "Oceanum Coperniceum, Oceanum Tychoicum, Mare Keplerianum, Lacum Galileaei, Paludem Maestlini, Insulam Scheinerianam, Peninsulam Gassendi, Montem Mersenni, Vallem Bullialdi, Sinum Wendelini, Promontorium Crugerianum, Fretum Eichstandiuianum, Desertum Lennemanni, & sic deinceps."¹¹⁴ Only ten years in the ground, Peiresc had already been written out of astronomy's triumphalist narrative of observation and discovery.¹¹⁵

Peoples

Peiresc's study of living people and their cultural forms is also based on observation and description. Margaret Hodgson's pathbreaking work on early anthropology remains relevant today, but it has been greatly amplified, expanded, and amended in these last years, primarily by scholars of early modern travel. In what follows, many of these lines of development will be evident. But it was, especially, Peiresc's interest in ritual, understood as historical evidence lived as practice, that differentiates his approach, as a student of the past, from that of even the most sophisticated traveler.

As in his historical and natural philosophical descriptions, Peiresc's memoirs of peoples living elsewhere are fixed in a particular time and place. Sometimes these are drawn from reports passed along to him by

others. For example, a note on the Jewish inhabitants of Cairo ("Juifs. Samaritains. Juifs de la Columbe au Cayre"), begins with just such a contemporary approach: "Dans le Cayre tous les Juifs sont contraints d'habiter en une mesme contree qui n'est pas esloignee de celle des François." The body of the memoir describes the different numbers of Jews, Samaritans, and Caraites in the city. In the margin, Peiresc noted that "le P. Gilles dict qu'il n'y a pas 12. familles de Samaritains en tout le Levant"—an eyewitness account that was wrong. The Caraites were said to have more than 60 synagogues—again a marginal note possibly attributable to de Losches. Peiresc noted that in addition the Jews had another quarter in Old Cairo named Bezeyin, where they buried their dead. From talking about Jews and mention of the Jewish cemetery, Peiresc came to note down a description of the Turkish cemetery.¹¹⁶

In the report of M. de Monts about Canada, Peiresc took special note of his comments about the weapons (bows and arrows) and boats (canoes) covered in painted tree bark.¹¹⁷ He noted that M. de Monts had prepared drawings of various animals. In keeping with the thinking of the seventeenth century, among these was one of a native. His painted body, clothes, and weapons were all described.¹¹⁸

From Tunis, Peiresc had received a memo from d'Arcos on Moorish foodways. After noting the size and shape of their cups, he observed that while the Moors drank only water at home, they did frequent taverns run by Christians, where they drank wine and spirits to excess. Despite running contrary to religious law this vice was tolerated, even publicly. Tableware was typically of wood since silver was banned. No tablecloth or napkin was used but rather people sat on the ground and ate off tables and plates made of wood; the rich used leather. Salt was not used and a salt shaker not present because of the heavy use of salt in preparing their meats. "Ordinarily," d'Arcos concluded, "all is boiled and little or nothing roasted."¹¹⁹

Despite these marvelous memoirs that dot Peiresc's collection, it was not so much that the jarring encounter with the strange opened his eyes to the familiar, as that the awareness of difference generated by a sensitized historical sensibility enabled him to see everyday practices as products of history. Indeed, from a heraldic perspective, pageants, processions, receptions, and, of course, births, marriages, and deaths were forms of living history. This perception went back at least to Peiresc's

visit to Rome. Gassendi tells us that "he was present at the Performance of Religious Ceremonies, as much as he thought he might with safety. For, being but of a weakly complexion, he was loath to thrust himself into a tumultuous Crowd of People."¹²⁰ In London with the French ambassador in 1606, Peiresc was trapped in a drinking bout with several Englishmen. He could not keep up, or the liquor down, but played along all the same. The humor of the spectacle appealed to his hosts, and as his behavior became the talk of the court he was eventually summoned by James I to tell the story in person.¹²¹

The most interesting of Peiresc's eyewitness accounts of ritual focus on those involving the king and the royal family: entries, funerals, marriages, and the Estates-General.¹²² Peiresc's interests follow closely those of an exact contemporary and correspondent, Théodore Godefroy, who published his *Le ceremonial de France, ou Description des ceremonies, rangs, & seances observées aux couronnemens, entrées, & enterremens des roys & roynes de France, & autres actes et assemblées solenneles* in Paris in 1619, during Peiresc's residence there as the influential private secretary to their mutual friend, Guillaume Du Vair.

Peiresc's archive preserved, for example, "La cérémonie du sacre du roy Louis XIII" observed during his entry to Reims, along with documentation of the inscriptions borne on the city's arches.¹²³ Much more substantial is a long document of royal entries in Provence and Languedoc in November 1622. Some are in Peiresc's own hand and some in that of his brother.¹²⁴ Peiresc's activities in this regard are representative; interesting, however, is his use of the word "dessein" in this context to refer not to the visual depiction of the painted arches and displays but to his verbal description.

In 1625 the royal match between Charles I of England and Henrietta Maria was observed by Vallavez, then in Paris (Peiresc having returned to Provence in 1623). He wrote a "Relation de ce qui c'est faict tant aux Fiançailles de Madame Henriette Marie de France soeur du Roy, avec Charles, premier Roy de la Grand Bretagne, lesquelles furent faictes au Louvre dans la Chambre du Roy le ieudy 8.me jour de May, iour de l'ascension 1625, Qu'au mariage de ladicte Dame qui fut faict a l'Eglise Notre Dame, le dimanche unzieme iour dudit mois et an."¹²⁵ The physical space of the king's antechamber was described first—including its furniture—then the movements, appearance, arrangement, and actions of the

principals. The celebrations received equally detailed attention, with Vallavez noting that the parties spilled over the next few days, with Cardinal Richelieu in particular having prepared "une superbe collation de confitures"—the equivalent of an English banqueting course of sweetmeats—accompanied by a concert of voices and instruments, itself followed by a fireworks display in the garden, which Vallavez described as "the most superb and beautiful invention that was seen in a long while."¹²⁶

But it was the church service that generated another kind of representation. Vallavez drew the "theater" created in Notre Dame for the marriage ceremony. There are two sketches, the first of the arrangement of the principals around the altar table, which is drawn in some detail head-on. Other seats are presented in a bird's-eye view.¹²⁷ The second is really a map, presenting the whole church and marking the locations where the principals were seated in the king's chamber for the "engagement."¹²⁸

The death of Henri de Gondi, cardinal de Retz, in 1622 was the occasion for an extraordinary demonstration. Accounts of royal funerals were of course published, as were those of great nobles.¹²⁹ Peiresc's own archive preserves many of these.¹³⁰ His own narrative starts in a fair hand but soon decays into a draft filled with crossing-out, insertion, and additions. Yet it ends with the word "Fin," suggesting that Peiresc at some point envisioned the work as a whole and as a literary product before abandoning it—a bit like the projected commentary on the Jovian moons.

Like other documents of this sort, it describes the decoration of the church and the catafalque, the positions of the marchers and mourners, and the content of the funeral oration.¹³¹ But it diverges from the norm in its focus less on the person of the deceased than on the concrete corporate structure that the ritualized expression of grief recalled into being. Gondi's death, in Peiresc's account, is but the occasion for the crystallization of ancient custom, preserving, still, ancient history. This survival, rather than the particular person's passing, is what fires his description.

He begins with the story of the cardinal's life and death, but then turns immediately to the funeral. Organization comes first—the procedures and personalities who decided its timing and format. Whether the curés

would wear their stoles or the dean his distinguishing black velvet bonnet required a meeting of the dean and chapter to decide, and Peiresc relates it to us, with both sides of the argument. There were decisions to be made about which churches would march on which side of the street—and here the decision was taken against “la plus ancienne coustume” but rather in accord with what the late cardinal had himself decided for the entry of the queen. There was the inevitably political dimension to the question of whether the Parlement wanted to hold its own memorial ceremony or participate in the church’s and the question of whether the court *ever* went to the funerals of cardinals—i.e., the inevitable disputes about priority between civil and ecclesiastical temporalities and the equally inevitable resort to the ancient registers of the Parlement for advice from precedent. The narrative of the corporate bodies’ jostling for prominence and control of the proceedings is full of personality and pique. It *is* a literary document. Thus, Peiresc noted that while the *parlementaires* formed up as a body, the domestics present failed to say anything about their former employer, “which the men of that chamber found very strange.”

“Coustume” frequently rears its head. Peiresc, as always, was keenly attentive to anything that could possibly cast a glance backward onto earlier decisions, actions, or attitudes. Custom in ritual, like oral history, was one such valuable avenue to the past. And, again, many maintained that it was not done (“n’estoit pas tenu”) to proceed as a body to a funeral, that “the register contained no example of a similar ceremony in the funerals of cardinals” (325v). And nothing was more dramatic than the account of how the “pesle mesle” sitting of the great ladies of the court disturbed the carefully planned—and counted—seating arrangement in the church, such that perceived lessers took seats reserved for their betters, setting in motion exactly the sort of disputes that could be expected. The president of the Cour des Comptes “murmured that the chamber could not suffer and was not accustomed to be preceded by them” (335v), while the *chantre* and archdeacon, “fearing some violence,” sought to work out a compromise, which turned into a debate about the priority of Church to Parlement (336).

The same interest in custom is played out in the description of the place and preeminence of Paris’s churches and civic corporations in procession. Peiresc shows convincingly how a ritual act could be read as a

historical document. For instance, Peiresc read the location of criers as a hint of the survival of the antique. In addition to the palace, Notre Dame, and the university, criers stood in front of St. Denis; at the Pallus, or Pailleux market, which was at the “marché neuf”; at the gate of Paris; at the beginning of the bridge of Notre Dame; at the Place de Grève; at the Baudoyer gate joining the *barrière* of St. Gervais; at the Petit Pont; and at the Place Maubert. Peiresc noted that there were many other celebrated crossroads, but the ceremony remained from those times when there were no habitations beyond the circuit of the criers. Peiresc is here coaxing urban history out of living ritual; those churches were precisely the ones given primacy “which much exceed 300 years of age, around the time that the second circuit [of walls] was made, which enclosed St. Germain de l’Auxerrois, St. Eustache, St. Magloire, St. Accoy, and the little St. Antoine” (325r).

The order of marching was also an order of seniority, with the oldest churches marching last. Nor was this taken lightly. When the priests of St. Hippolyte got ahead of those of St. Sauveur and spread across the street, they were retreated and placed behind St. Sauveur. Precedence always mattered. Nor was it beyond imagining that one church group would respond to the encroachment of another with blows, using batons and even their processional crosses to ward them off (328v). And, occasionally, changes were made for aesthetic reasons: when the little but ancient and highly privileged churches began to march, instead of walking side by side across the street they went single file, so as to lengthen their few numbers and give an impression of robustness (329r). To make sure this complex narrative could be easily visualized, at least in part, Peiresc drew up a table of which curés walked on which side of the road (330r). There was hidden history to be excavated here as well. That St. Bartholemy marched with St. Hilaire du Mont and St. Estienne du Mont, despite its being located in the Cité, the oldest part of Paris, showed that the order was “made according to the order of antiquity; and in fact, St. Bartholemy was not built until much later, upon the ruins of the Abbey of St. Magloire, which was burned only during the reign of King Henri I, in 1034” (328v).

For this extraordinary story and document, many of Peiresc’s working papers survive. There are his notes on the outline summary of events and chronology (357). We have a similar set of summary references to the

legal texts referred to in the debates about seating and precedence (384). Remarkably, and perhaps uniquely for Peiresc's oeuvre, we possess the outline of the essay, with the different parts crossed off as if to indicate their having been accomplished. This focuses exclusively on the ceremony in the church but descends to the detail of sentence-by-sentence (385). We also have a few paragraphs, worked out in prose and then struck through (386r). We even have the overview of the entire essay, in outline form, with strikethroughs (386v). A broadside of the *mandement*, in his collection, ordering participation in the funeral would have provided Peiresc with much of the basic information he used in the essay (389). Finally, the work had a title—and if not exactly a title page, it is a title that could fill a page: “A very precise relation, of all the order and all the ceremonies that one observed at the obsequies and funeral of the late Cardinal de Rhetz, as much for the transport of his body from the place of his death, up to Paris, and for the procession of his interment, as well as the meeting of the companies that assisted at his service, as well as the deliberations and expedients that were taken in the diverse conflicts and difficulties created by reason of rank and precedence, as much among the clergy as among other persons of quality who had been invited. Following which all the clergy wanted to arrange themselves so that each would be in an honored place, without the mutual recriminations, instead of which all was confusion and tumult, as usual. Together with the rolls and commands delivered to this effect, and the acts preserved in the registers of different places, in the chapter of the Cathedral of Paris and in the sovereign companies, the Parlement, the Courts of *Comptes* and *Aydes*, the Hôtel de Ville, and the University of Paris” (358).

We also know who helped Peiresc with this. The key figure was Herbert, archpriest of St. Marie Madeleine. We have the document signed by him (351r) and dated 16 November. Peiresc acknowledged this help in a letter, a draft of which was kept in this file. In it, we can also see Peiresc directing specific questions at Herbert, exploring matters of further interest or of abiding unclarity. The questions were specific: how many? where? when? who? But they also reveal the truth behind the whole: it was done “for the contentment of Monsieur de Lomenie, who gave the subject for all this research.” Lomenie was the chancellor and one of Peiresc's correspondents (405r). Why he might have been inter-

ested in this subject is not stated. Herbert's answers in the form of documentation came later (411). Someone else (M. de Montmaur) provided Peiresc with the detailed contents of the funeral oration (413). Peiresc was also assisted by another memoir, this from Blanc, vicar-general of Notre Dame (392), which in turn provoked more questions and answers (402, 403, 404). Peiresc collected also the *procès-verbaux* from the Parlement and different courts (367, 373, 381, 384). The detail in Peiresc's essay is extraordinary; in these working materials, and in the incredible precision of the questions he wanted answered, we see how committed his work was to the reconstruction of the past.

From marching orders Peiresc worked backward to corporate structure and the history that survived latent, and for all intents and purposes lost, in that structure. A memoir in Peiresc's hand, dated October 1622, “DESNOMBREMENT DU CLERGÉ DE NOTRE DAME,” belongs to the inquiry sparked by the funeral essay. It is an extraordinary representation of the human wealth of the church, but also of its many institutional dependencies and the people who ran them. The various church offices are enumerated and their occupants named, from the dean all the way down to the clerks and chaplains. Peiresc also gives occasional indication of their costs and revenues.¹³² What escaped him gives some direction to what he was looking for. “One wants to know [*On desire sçavoir*],” another page begins, “the number and standing of the servants who came to pray at the obsequies of the defunct.” “In what place lodged the nine last criers who brought the final churches,” begins another line of inquiry. But the motivation behind some questions still seems opaque.¹³³ A small side of paper is covered with questions about rank and precedence in processing: “En quel rang marcherent.”¹³⁴ Peiresc also wanted to know about the number of presbyters at different churches (407). Some of these questions were formulated by Peiresc and then answered by someone who knew the answers: Herbert, “Archiprebstre de la Madeleine.” We know this because of the draft letter to him that accompanies these notes. It too is full of questions about marching order and precedence.¹³⁵

But this is not the only extraordinary document of Peiresc's political anthropology. In fact, others date from his trip to England in 1606. There, amidst new acquaintances who were to accompany his learned adventures for the next decades—men like Camden, Cotton, Spelman,

and Selden—he also showed an already refined taste for political institutions and their long historical development. In London at the end of May and beginning of June, Peiresc was able to witness firsthand three important acts of state: the royal audience of a new ambassador—the French, in whose suite he had traveled—the investiture of new members into the Order of the Garter at Windsor, and the meeting of a session of Parliament. These experiences evoked careful descriptions from Peiresc.

That meeting of Parliament provided Peiresc with another occasion for a startling piece of description. The “Parlement General” of England met on Tuesday 6 June (N.S.) in the Great Chamber of Westminster, whose details of appearance Peiresc described. It was another memory space.¹³⁶ He then described the clothing worn by those present, with greatest care devoted to the king’s attire. But what is special about this description is that Peiresc sat and sketched its disposition, providing us with one of the earliest surviving depictions of a meeting of the English parliament—a wonderful acknowledgment of the power of mapping for the description of human culture (fig. 11.3).

There are two other such “maps” of the ancient constitution in action. Like that of the English Parliament, they capture the French representative body, the Estates-General meeting in 1614. They support texts written by Vallavez, and annotated by Peiresc, who was present in his capacity as Du Vair’s secretary. The first, copied out of the *registres* of the Parlement of Paris in Peiresc’s hand, is the “Proces verbaux des propositions et deliberations faictes pour les rangs de la Procecion generale que le Roy Louis XIII.^e fait a Paris le Dimanche 26.^{me} Octobre 1614 avant l’ouverture des Estats Generaux. Ensemble de l’ordre qui y fut observé fort exactement descript et inseré dans le Reg.^{ie} du Parlement.” It is labeled “1614 23–26 Octobre. PROCESSION GENERALE pour LES ESTATS.” It gives, for each of the enumerated days, the individuals present and some narrative of the events.¹³⁷ Peiresc would have been interested in the account and order of the procession: clerics first, from lesser to greatest, then the royal suite, then the great nobles, the parlement, and the corporations of Paris, continuing with their arrival at the church of Notre Dame and their seating arrangement. The verbal description was followed by a seating chart.¹³⁸

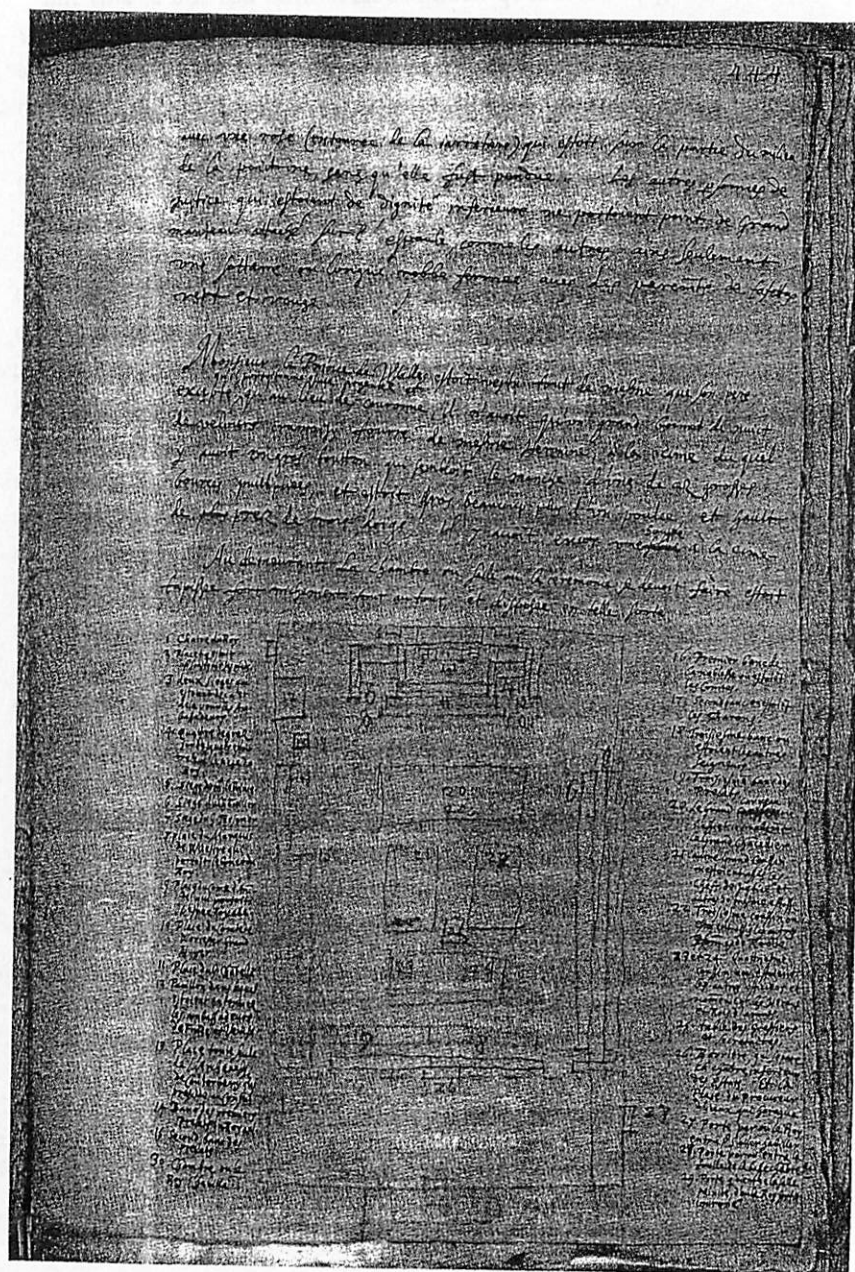


Figure 11.3
Bibliothèque Inguimbertaine, Carpentras, MS 1794, fol. 444r: Peiresc’s drawing of the House of Commons in session, with key.

Even more impressive is a document in the hand of Vallavez, "Mémoires par Monsieur de Valavez de l'ouverture des estats faite par le Roy Louys 13 en la Grand Sale de Boubon le Lundy 27 Oct. [1614]," which Peiresc labeled "L'OUVERTURE DES ESTATS."¹³⁹ It described the seating arrangement, then the room itself, and finally the principals and their attire. But, here, too, it is what Peiresc the mapper does with information that is so fascinating. He prepared an extraordinarily detailed drawing of the scene. It captures everything in Vallavez's account save the colors and the clothing, but it goes beyond it in precision and in scope—adding information about the seating of the second and third estates (469).

These detailed accounts of human actions, mostly recorded as they unfolded in time, reflect Peiresc's concern with preserving information for its possible later usefulness, even if the significance of any given detail at any given moment was hard to discern. In this sense, his records of funerals, parliamentary meetings, or royal marriages are like his experiments on optics or pebble formation or astronomical observation: as detailed as possible and as comprehensive as possible. This breadth, in turn, reflects a rejection of inherited criteria of relevance and a constructive sort of ground clearing. We are comfortable with this in the context of the New Science, as a Baconian declaration, or as Boyle's practice; less so, typically, with suspension of judgment as a rule for the historical sciences. But Peiresc's practice of description takes us back to a time when these boundaries were not fixed and the future shape of so many intellectual inquiries was still to be determined. And, of course, Peiresc made the right decision: thanks to it historians at the beginning of the twenty-first century can use his archive to reconstruct medieval monuments as well as the movements of priests and planets.

Notes

I am very grateful to the editors for months of attention, comments, and careful reading, and to the collective assistance of the entire *Historia* group over four happy weeks in Berlin. I also wish especially to thank Noel Swerdlow for patiently discussing Peiresc's astronomical work with me and explaining its relationship to Galileo's. Any misunderstandings and mistakes are mine.

Sources cited in bold face type appear in the Primary Sources of the bibliography.

1. See Miller 2000.
2. Kelley 1970; Shapiro 2000. For Peiresc see Miller 2001a, 68–70.
3. Gassendi 1657, year 1628, 28.
4. Cunningham 1985; Pazzini 1957; French 1994, esp. ch. 11.
5. Peiresc describes this event in many contemporary letters; in the postscript of one to Schikard of 4 September 1634, Peiresc noted that "Il [Gassendi] vid cez jous passez les veines lactees d'Asellius, sur un corps humain qui avoit esté pendu et estranglé, une heure et demy aprez sa mort." Peiresc to Schikard, 4 September 1634, letter 4, unpaginated, Württembergische Landesbibliothek 563, fol. [2]r; Gassendi 1657, year 1634, 104–105. It is to this that reference is made in Pecquet 1654, 18. I thank Gianna Pomata for pointing me in this direction.
6. Alpers 1983, xxi.
7. Momigliano 1955, 169; Momigliano 1990, 56–57.
8. Alpers 1960, 197, noted that "*ekphrasis* originated in late antiquity as a rhetorical mode of praising and describing people, places, buildings, and works of art" but then focused exclusively on art. More recent work on *ekphrasis* remains exclusively focused on art (painting and literature); for example, Carrier 1987, 31. Even Ruth Webb—who explains that "not only is *ekphrasis* not conceived as a form of writing dedicated to the art object" but it is not even restricted to objects and could include anything or anyone—does not escape from the same trap (Webb 1999, 7–18).
9. Winkler and Van Helden (1992, 212, 216) argue in the case of Galileo that he eschewed images for reasons of class rather than precision. For the explanatory power of images in the New Science see Lefèvre, Ren, and Schoepflin 2003 and Freedberg 2002.
10. Kemp 1993, 88–90. But Kemp notes that at least the later Leonardo thought that "illustrations reigned supreme for description, while the text remained best adapted to explaining how something worked" (94).
11. See Brown 1996, 76–77; Haskell 1993, 90–92; Burke 2003, 276.
12. Ginzburg 1988, 18.
13. I have done this, in part, in Miller 2000, 22, 28.
14. F. Bacon 1858–74, 19:409–412.
15. F. Bacon 1858–74, 10:24–114.
16. F. Bacon 1858–74, 10:198–227.
17. Pecquet 1654, 17.
18. See for example Ogilvie 1997, 308.
19. Blair 1992.
20. Dear 1991, 137.
21. Dear 1985, 154. The English kind "takes the form of historical reportage of events—accounts of what the author witnessed as a result of chance observation or, more typically, as a result of deliberate contrivance, often including

- place, date, and even names of witnesses" (Dear 1990, 663). Dear contrasts this with a Jesuit, or Catholic, science, devoted to proving a universal statement from particulars (Dear 1995, chapter 2).
22. Dear 1991, 162.
 23. Bibliothèque Inguimbertaine, MS. 9531, fol. 189; Gassendi 1657, year 1629, 36.
 24. Quoted in Sabra 1981, 61.
 25. Alpers 1983, 12.
 26. Blair 1992, 542n3; Rubiés 1996.
 27. Gassendi 1657, year 1619, 191.
 28. Bibliothèque Nationale, MS. Latin 8958, fol. 276r contains the inscriptions and dated drawing of a griffin; fol. 276v the long description.
 29. Bibliothèque Nationale, Cabinet des Estampes Res. Aa53–54. For example, Stern 1956.
 30. Bibliothèque Nationale, MS. N.a.f. 5171, Peiresc to Roumouilles, 1 June 1609, fol. 708.
 31. For this practice, see Bedos-Rezak 2000, 1527.
 32. Bibliothèque Nationale, MS. N.a.f. 5171, Peiresc to Roumouilles, 1 June 1609, fol. 708v.
 33. Bibliothèque Inguimbertaine, MS. 1791.
 34. Gassendi 1657, year 1618, 184.
 35. Leclercq 1934, 2717; Bibliothèque Nationale, MS. N.a.f. 5171, fol. 709.
 36. Leclercq 1934, 2708–2747; on Peiresc, 2710–2723.
 37. Gassendi 1657, year 1622, 207.
 38. Bibliothèque Inguimbertaine, MS. 1791, fol. 210.
 39. Bibliothèque Inguimbertaine, MS. 1791, fols. 211–255, 522.
 40. Bibliothèque Inguimbertaine, MS. 1791, fols. 52, 492.
 41. For example Bibliothèque Inguimbertaine, MS. 1791, fols. 81, 83.
 42. For example, for an overdoor painting, Bibliothèque Inguimbertaine, 1791, fol. 102, and a tomb at fol. 516.
 43. Compare with the work of Pastoureau 1982a, 106.
 44. Bibliothèque Inguimbertaine, MS. 1791, fol. 33.
 45. This is the "héraldique érudit" referred to by Pastoureau 1982c, 337.
 46. Bibliothèque Nationale, MS. N.a.f. 5174, fol. 329. Alongside the Constable is his standard, which is also meticulously described and is also drawn on a separate page (fol. 339). Bibliothèque Inguimbertaine, MS. 1791, fols. 74–79, fol. 134. On the importance of the boar, see Pastoureau 1982b.
 47. Bibliothèque Inguimbertaine, MS. 1791, fol. 103.
 48. Bibliothèque Inguimbertaine, MS. 1864, fols. 232–233.
 49. Bibliothèque Inguimbertaine, MS. 1864, fol. 303.

50. Bibliothèque Inguimbertaine, MS. 1864, fols. 307–308.
51. Peiresc's graphic realism—vertical copying of vertical inscriptions (Bibliothèque Nationale, MS. N.a.f. 5174, fol. 34/121) is unmatched even in modern studies like Montesquiou-Fezensac and Gaborit-Chopin 1973–77, 2:341.
52. Bibliothèque Inguimbertaine, MS. 1791, fols. 79, 124, 130, 131, 511, 511bis; Bibliothèque Nationale, MS. N.a.f. 5174, fols. 128–129. Marjon van der Meulen published some of these (Meulen 1997, 223–226).
53. Bibliothèque Inguimbertaine, MS. 1791, fols. 479–481. See Stephany 1957.
54. Bibliothèque Inguimbertaine, MS. 1791, fol. 85.
55. Bibliothèque Inguimbertaine, MS. 1791, fol. 523v.
56. Bibliothèque Inguimbertaine, MS. 1791, fol. 198.
57. Bibliothèque Inguimbertaine, MS. 1791, fol. 132.
58. Gassendi 1657, year 1607, 121. For their relationship see Jaffé 1993. Three sets of copies of letters exchanged by Peiresc and Pasqualini do survive: a complete set in the Bibliothèque Méjanes at Aix-en-Provence (209 (1027)), another at the Bibliothèque Inguimbertaine at Carpentras (MS. 1809), and a set in the Bibliothèque Nationale (MS. N.a.f. 5172) that seem to have been stolen from this Carpentras register by Libri.
59. Peiresc to Pasqualini, 4 December 1602, Bibliothèque Inguimbertaine, MS. 1809, fol. 252v; Bibliothèque Méjanes, MS. 209 (1027), p. 38.
60. Peiresc to Pasqualini, 5 September 1605, Bibliothèque Inguimbertaine, MS. 1809, fol. 351v; Bibliothèque Méjanes, MS. 209 (1027), p. 50.
61. See Gassendi 1657, year 1608, 127. Palamède de Fabri was the sieur de Vallavez.
62. Peiresc to Pasqualini, 2 November 1608, Bibliothèque de l'Ecole de Médecine, MS. H.271, fol. 6r; Bibliothèque Méjanes, MS. 209 (1027), p. 80.
63. The section on Charlemagne is in Bibliothèque Nationale, MS. N.a.f. 5172, fol. 316v; the copies in Aix are made from this; Bibliothèque Inguimbertaine MS. 1809 is an inferior copy.
64. Bibliothèque Méjanes, MS. 209 (1027), 87–88; Bibliothèque Inguimbertaine, MS. 1809, fol. 300v.
65. Peiresc to Pasqualini, Bibliothèque Méjanes, MS. 209 (1027), 88–93.
66. Peiresc to Pasqualini, Bibliothèque de l'Ecole de Médecine, MS. H.271, fol. 12.
67. Peiresc to Aldrovandi, 30 October 1601, Bibliothèque Inguimbertaine, MS. 1809, fol. 378; Peiresc to Aldrovandi, 28 November, 1601, Bibliothèque Inguimbertaine, MS. 1809, fol. 381; Peiresc to Della Porta, 25 January 1602, Bibliothèque Inguimbertaine, MS. 1809, fol. 382; Bibliothèque Nationale, MS. N.a.f. 5172, fol. 107. For Clusius, see Bibliothèque Inguimbertaine, MS. 1809, fol. 402, and Peiresc 1889–1898, 7:941–960. Aldrovandi is by far the most studied, though in addition to the works of Olmi and Findlen see more narrowly Carrara 1998. I am grateful to Riccardo Di Donato for giving me the volume containing Carrara's article.

68. Ogilvie 1997, 275, 391–393.
69. Nardi 1980, 312; Legré 1899–1904.
70. Bibliothèque Inguimbertaine, MS. 1809, fol. 402; Joret 1893–94, 437–442.
71. Bibliothèque Inguimbertaine, MS. 1821, fol. 218.
72. There are many drawings of animals and animal parts; there are accounts of the flora and fauna of extra-European lands; there are descriptions of exotic animals to hand; and there are real animals, kept at home for study.
73. Bibliothèque Inguimbertaine, MS. 1821, fols. 82–83.
74. Daston 2001a.
75. Bibliothèque Inguimbertaine, MS. 1774, 407–409, in Humbert 1951b.
76. Peiresc to Dupuy, [November] 1633, Peiresc 1888–98, 2:645–646.
77. Gassendi 1657, year 1634, 95; Peiresc to Barberini, 5 May 1634, Bibliotheca Apostolica Vaticana, MS. Barb.Lat. 6503, fol. 88.
78. Gassendi 1657, year 1634, 95. For an overview of this history see Lindberg 1976.
79. This body of work has not found its way into the history of anatomy of the eye. See Koebling 1967, Hirschberg 1899–1918, Sudhoff 1907. For an early version of the “high road” in the history of optics see Wilde 1838. For parts of the experimental history that have been written see Koebling 1968; Lux 1989, 40, 123.
80. Bibliothèque Inguimbertaine, MS. 1774, 446.
81. Bibliothèque Inguimbertaine, MS. 1774, 444.
82. Bibliothèque Inguimbertaine, MS. 1774, 487–488.
83. See French 1994, 315–317. But on Gassendi’s indubitable sympathy for experimentalism, see 331–333.
84. Gassendi 1657, year 1634, 99.
85. Boulliaut [sic] to Gassendi, 7 September 1634, Bibliothèque Inguimbertaine, MS. 1810, 48–50.
86. Bibliothèque Inguimbertaine, MS. 1774, 434–435, 436. The first documented dissection is of the eye of a *lamia*, “gros poisson du poids de 4. quintaulx,” on 11 May, with additional notes from the 11th, 13th, 14th, 15th, and 16th (469–470).
87. Bibliothèque Inguimbertaine, MS. 1774, 436.
88. Bibliothèque Inguimbertaine, MS. 1774, 403–406. This memo is interpolated, more or less directly, into Peiresc to Schikard, 29 August 1634, Württembergische Landesbibliothek, MS. 563, unfoliated. At the same time that he was composing these documents, Peiresc drew up another essay on much the same material, but phrased in terms of lunettes and mirrors: “Experiances des LUNETTES VERDES/ de M.^r Gassend & autres tant CONCAVES et CONSERVES que CONVEXES,” dated 30 August 1634. Bibliothèque Inguimbertaine, MS. 1774, 457–458.

89. Humbert 1951a. It is this grudging work that is listed in the bibliography prepared by Turner 1969, 59.
90. Lindberg 1976, 203.
91. Bibliothèque Inguimbertaine, MS. 1774, 426–427.
92. Bibliothèque Inguimbertaine, MS. 1774, 428–431; Gassendi 1657, year 1634, 101.
93. Bibliothèque Inguimbertaine, MS. 1774, 438–440.
94. Bibliothèque Inguimbertaine, MS. 1774, 477, 478–482.
95. Initially, Peiresc wrote, he attributed this particular phenomenon “aux lunettes ordinaires que j’avoys suspendues devant mes ieux”—an indication that Peiresc wore eyeglasses, at least later in his life—but further experimentation revealed it had nothing to do with the glasses themselves.
96. Bibliothèque Inguimbertaine, MS. 1774, 478–482.
97. Peiresc and his circle are discussed in Bigourdan 1918, 13–69; Humbert 1948.
98. For example, Gualdo to Peiresc, quoted in Rizza 1961, 438.
99. He received news of its publication from Pignoria in the spring of 1610 and probably received his copy of the *Sidereus nuncius* from his friend and teacher Giulio Pace with a letter of 23 August 1610; “de ce live de Galileus que vous avez demandé” was what Pacius wrote (quoted in Rizza 1961, 437).
100. See Chapin 1958; Le Paige 1891–92; Costabel 1983; Bernhardt 1981.
101. This material cries out for careful scrutiny by a historian of astronomy.
102. Despite looking directly at the belt and sword of Orion, and despite commenting explicitly on the meaning of “Nebulosa”—or perhaps because of it—Galileo did not spot the nebula in Orion (Galileo 1993, 123–131).
103. The use of the names of these French queens—of Florentine derivation—for satellites III and IV appears in the 1611 title page Peiresc commissioned for his never-finished project; until that time they were named for the Medici grand dukes Ferdinandus and Franciscus.
104. Jardine 1984, 27.
105. There are of course other documents from the intervening period.
106. Gassendi 1657, year 1631, 62. For Peiresc’s failure and Gassendi’s success see Humbert 1950, 30, quoting selectively from Peiresc to Gassendi, 22 December 1631. Peiresc and his observer-friends, the doctors Le Febre and Noël, saw that the day dawned cloudy and went back to bed; when the sky cleared they found themselves at mass where an unusually long sermon kept them until 11 o’clock—Gassendi had observed the transit at 10:30. Interestingly, Peiresc showed no disappointment whatsoever. For an overview, see Van Helden 1976.
107. The material is divided up among three manuscripts. The log begins on 3 November 1631 and runs through February 1632. The beginning and end are found in Bibliothèque Inguimbertaine, MS. 1832. However, material stolen by Libri and later recuperated is divided between Bibliothèque Nationale, MS. N.a.f.

- 5856 and N.a.f. 5174, with fols. 380–383 and 388–390 in the former and 384–387 in the latter.
108. Peiresc to Schikard, 4 September 1634, letter 4, unpaginated, Württembergische Landesbibliothek, MS. 563 [2]r.
109. It was Frédeau who sketched Peiresc's "Alzaron." See Rizza 1961, 100 for Peiresc's letter of recommendation to the Barberini for Frédeau. From correspondence with Borilly, we know that Peiresc was using him to draw as early as 1630 (Peiresc 1888–98, 5:23). Gassendi, *Opera omnia*, vol. 4, quoted in Humbert 1936, 16; Humbert 1931.
110. Humbert 1931. Jaffé (1990, 175) has drawn on this chronology to explain the dating of Mellan's printed engravings.
111. Kopal and Carder 1974, 9; Van de Vyver 1971; Ashworth 1993, 323–324; Whitaker 1989; Whitaker 1999, 17–35. But it is not mentioned in Winkler and Van Helden 1993.
112. Peiresc to Cassiano, 4 June 1637, Peiresc 1989, 269.
113. Hevelius 1647, 206–207. Humbert 1931, 199.
114. Hevelius 1647, 224.
115. Gassendi did better with J. Caramuel Lobkowitz, to whom he sent a map, and who seems to have used it in his lunar observation of 14 August 1642. Unlike Hevelius, he proposed to name lunar features after modern scholars: "Tous nos amis y seront," he wrote to Gassendi, "toi-même, et Peiresc, et Mersenne, et Naudé." Riccioli adopted this scheme in 1651 and finally translated Peiresc to the moon. Humbert 1931, 200.
116. Bibliothèque Inguimbertaine, MS. 1864, 261.
117. Bibliothèque Inguimbertaine, MS. 1821, 125v.
118. Bibliothèque Inguimbertaine, MS. 1821, 126.
119. "Relation des mesures et des Vases dont on use à Thunis en Barbarie faicte par le S. d'Arcos" [Peiresc's title], Bibliothèque Nationale, MS. Dupuy 688, fol. 63. The last and longest paragraph deals with foodways.
120. Gassendi 1657, year 1600, 35. This same combination of historical desire and concern for physical well-being characterized Aby Warburg's experience of Rome in June 1929. For Peiresc, as for Warburg, being part of the ritual trumped worries about health, especially the worries of others.
121. Gassendi 1657, year 1606, 99.
122. The literature on this subject matter is now substantial. See for example, Watanabe-O'Kelly and Simon 2000; Wisch and Scott Munshower 1990.
123. Bibliothèque Inguimbertaine, MS. 1791, 102, 128–132.
124. Bibliothèque Inguimbertaine, MS. 1794, 186–91; 195–201. I have not yet been able to consult, for comparison, *La voye de laict, ou, Le chemin des heros au palais de la gloire: ouvert a l'entrée triomphante de Louys XIII. Roy de France & de Nauarre en la cité d' Auignon le 16. de Nouembre 1622* (Avignon, 1623).
125. Bibliothèque Inguimbertaine, MS. 1795, 43–81.

126. Bibliothèque Inguimbertaine, MS 1795, 55.
127. Bibliothèque Inguimbertaine, MS. 1795, 90.
128. Bibliothèque Inguimbertaine, MS. 1795, 91.
129. See Tate 1771, 1:204.
130. Bibliothèque Inguimbertaine, MS. 1795.
131. Bibliothèque Inguimbertaine, MS. 1795, fol. 322.
132. Bibliothèque Inguimbertaine, MS. 1795, fol. 394.
133. Bibliothèque Inguimbertaine, MS. 1795, fol. 402.
134. Bibliothèque Inguimbertaine, MS. 1795, fol. 404v.
135. Bibliothèque Inguimbertaine, MS. 1795, fol. 405, undated autograph draft.
136. Bibliothèque Inguimbertaine, MS. 1795, fols. 443–444.
137. Bibliothèque Inguimbertaine, MS. 1794, 314–321.
138. Bibliothèque Inguimbertaine, MS. 1794, 319–320r; 320v–321v, summary on 322r.
139. Bibliothèque Inguimbertaine, MS. 1794, 465–468.

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Historia

Empiricism and Erudition in Early Modern
Europe

Gianna Pomata and Nancy G. Siraisi, editors

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