

# THE MUSEUM: ITS CLASSICAL ETYMOLOGY AND RENAISSANCE GENEALOGY

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*This essay investigates the social and linguistic construction of musaeum in sixteenth- and seventeenth-century culture. As a concept which expressed a pattern of activity transcending the strict confines of museum itself, the idea of musaeum was an apt metaphor for the encyclopaedic tendencies of the age. Mediating between public and private space, between the humanistic notion of collecting as a textual strategy and the social demands of prestige and display fulfilled by a collection, musaeum was an epistemological structure which encompassed a variety of ideas, images and institutions that were central to late Renaissance culture.*

It is never a waste of time to study the history of a word.

LUCIEN FEBVRE

'MUSEUM,' wrote the Jesuit Claude Clemens, 'most accurately is the place where the Muses dwell.'<sup>1</sup> To investigate the museums of the late Renaissance, we must first begin with the word itself. *Musaeum*. How did it function in contemporary usage and to what sort of structures—intellectual, institutional and otherwise—did it allude? On a general level, this study explores the ways in which *musaeum* structured significant aspects of sixteenth- and seventeenth-century culture. As a concept which expressed a pattern of activity transcending the strict confines of museum itself, the idea of *musaeum* was an apt metaphor for the encyclopaedic tendencies of the period. Most compelling about the usage of the term *musaeum* was its ability to be inserted into a wide range of discursive practices. Linguistically, *musaeum* was a bridge between social and intellectual life, moving effortlessly between these two realms, and in fact pointing to the fluidity and instability of categories such as 'social' and 'intellectual', and 'public' and 'private', as they were defined during the late Renaissance. From a philological standpoint, its peculiar expansiveness allowed it to cross and confuse the intellectual and philosophical categories of *bibliotheca*, *thesaurus*, and *pandechion* with visual constructs such as *cornucopia* and *gazophylacium*, and spatial constructs such as *studio*, *casino*, *cabinet/gabinetto*, *galleria* and *teatro*, creating a rich and complex terminology that described significant aspects of the intellectual and cultural life of early modern Europe while alluding to its social configura-

tion.<sup>2</sup> Mediating between private and public space, between the monastic notion of study as a contemplative activity, the humanistic notion of collecting as a textual strategy and the social demands of prestige and display fulfilled by a collection, *musaeum* was an epistemological structure which encompassed a variety of ideas, images and institutions that were central to late Renaissance culture.

My purpose here is to consider the social and cultural definitions of *musaeum* and the vocabulary of collecting. In organizing my discussion initially around the language of collecting and then around the conceptual spheres within which such terms circulated, I base my work on the premise that a detailed socio-linguistic analysis of certain key words—in this instance those encompassing the experience of collecting—provides insight into the cultural processes of past societies.

The word *musaeum*, however, is merely a starting point: a means of entering a wide range of philosophical discussions of knowing, perceiving and classifying that emerged in the humanistic and encyclopaedic traditions which collectors embraced and ultimately transformed during the sixteenth and seventeenth centuries. Through this approach, a manifest taxonomy of terms emerges. Although scores of words described collecting, collections and museum-like activities, no one term was as comprehensive as *musaeum* itself. While the rich and variegated vocabulary of collecting emerged from a multitude of social practices and intellectual traditions, the use of these terms was regulated by their relationship to *musaeum*—the most expansive model for the activity of collecting. The idea of *musaeum*

provided the syntax in which the grammar of collecting could be played out; to borrow Baudrillard's phrase, it was structured as 'an immense combinatorial matrix of types and models' that expanded, as needed, to incorporate the new and diverse paradigms of collecting which arose.<sup>3</sup>

Examining a word as rich and complex as museum—a word very much in transition during this period—we learn much about the society that transformed its definition and the territorial implications of its usage. For the museum was certainly an attempt to make sense of the collector's environment; hence its structure was inherently dependent on contemporary discursive practices. As Robert Harbison argues, the museum was—and still is—an 'eccentric space', a setting peculiarly susceptible to the cultural strategies of its creators.<sup>4</sup> As a repository of past activities, created in the mirror of the present, the museum was above all a dialectical structure which served as a meeting point in which the historical claims of the present were invoked in memory of the past.

Our current use of the term 'museum' places it entirely within the public and institutional domain. Yet the original usage emphasized its private and exclusionary functions. The transition of the museum from private to public, from an exclusive to an inclusive construct, in a period in which the relationship between 'private' and 'public' activity was significantly redefined,<sup>5</sup> suggests that the museum did not evolve in isolation, but was deeply and profoundly formulated by the pattern of sixteenth- and seventeenth-century society.

#### The Humanists rediscover the Muses

'At last my little Museum merits such a name,' wrote Giacomo Scafili to Athanasius Kircher upon receipt of his book, 'now rich and complete with the *Musurgia*, the great work and gift of you, Father; even if there were nothing else in it save for this lone book, it could rightfully be called the room of the Muses [*stanza delle Muse*] because the book contains them all.'<sup>6</sup>

The etymology of museum is itself a fascinating subject for study. While the practice of collecting emerged primarily in the sixteenth and seventeenth centuries, we need to understand its background to appreciate the role of medieval and early Renaissance learning in setting the stage for the widespread appearance of museums in the early modern period. Rejecting the classification of the collection at the

Roman College as a *galleria*, a term referring primarily to its physical organization and to collections 'made solely for their magnificence', the Jesuit Filippo Bonanni, who restored Athanasius Kircher's museum to its original splendour at the end of the seventeenth century, explained:

Nor is the collection in question here of this kind, because it is improperly named *Galleria*. One should more properly say *Museo*, a term originating from the Greek according to Pliny, which means the same as *Domiculum Musis dicatum pro diversorio eruditorum*, which Strabo refers to in his last book, *apud Alexandriam fuisse Museum celebratissimum*. Spartan discusses it in his life of Adrian, saying: *Apud Alexandriam in Musio multas questiones Professoribus proposuit . . . or, as musaeum alludes, one says a place dedicated to the Muses . . .*<sup>7</sup>

Originally *musaeum* had two definitions. It was most traditionally the place consecrated to the Muses (*locus musis sacer*), a mythological setting inhabited by the nine goddesses of poetry, music, and the liberal arts.<sup>8</sup> 'They are called *Muses*,' wrote the Chevalier de Jaucourt, 'from a Greek word which signifies "to explain the mysteries", *μυθεῖν*, because they have taught men very curious and important things which are from there brought to the attention of the vulgar.' And, as the *Encyclopédie* article continued, 'The name of Muses, goddesses and protectresses of the Fine Arts, was uncontestedly the source of museum.'<sup>9</sup> More specifically, *musaeum* referred to the famous library at Alexandria, the *μουσεῖον* described by Strabo, which served as a research centre and congregating point for the scholars of the classical world.<sup>10</sup> Even in its original usage, *musaeum* was transformed into an institutional setting in which the cultural resources of a community were ordered and assembled, implying that the classical writers too had recognized the expansiveness of museum as a category of experience.

The fact that the classical conception of museum did not confine itself either spatially or temporally was important for its later usage. As Pliny and Varro remind us, nature was the primary haunt of the Muses, and therefore a 'museum' in the most literal sense. Pliny's conflation of grotto and museum in his *Natural History* further emphasized the image of museum as a potentially pastoral setting, a contemplative place found in nature.<sup>11</sup> Given the passion for constructing grottoes in the gardens of Renaissance Europe, it is obvious that nature's potential to be perceived as a museum expanded in the intricate interplay between art and nature that unfolded in the famous gardens—Boboli, Bomarzo and Pratolino to

cite only a few—of the sixteenth and seventeenth centuries.<sup>12</sup>

In a seminal study of late Renaissance and Baroque culture entitled *L'Anti-Rinascimento*, Eugenio Battisti characterized the garden as a 'conceptual system.'<sup>13</sup> The same might well be said of the museum as it evolved during this period; in its crystallization as a category which incorporated and ultimately unified a variety of—from our own perspective—seemingly disparate activities, the museum was indeed a central organizing principle for cultural activity by the late sixteenth century. It was a conceptual system through which collectors interpreted and explored the world they inhabited. 'Those places in which one venerated the Muses were called Museums,' explained Teodoro Bondini in his preface to the 1677 catalogue of Ferdinando Cospi's museum in Bologna. 'Likewise I know you will have understood that, although a great portion of the Ancients approved of the name Muse only for the guardianship of Song and Poetry, none the less many others wished to incorporate all knowledge under such a name.'<sup>14</sup> Thus the museum, as the nexus of all disciplines, became an attempt to preserve, if not fully to reconstitute, the encyclopaedic programme of the classical and medieval world, translated into the humanist projects of the sixteenth century, and later the pansophic vision of universal wisdom that was a leitmotif of seventeenth- and early eighteenth-century culture.

If *musaeum* was indeed a place consecrated to the Muses, then the Renaissance itself can be described as a 'museum'; more than any other period, the cultural and intellectual programmes of the period from the fourteenth to the seventeenth century manifested an overwhelming concern with the very disciplines patronized by the Muses. Tellingly, *musaeum* was a term little used during the Middle Ages; at best it was related to the idea of *studium*, for it does not seem to have had any independent meaning of its own, save for scattered references to its classical roots, until the late sixteenth century. As Liliane Châtelet-Lange points out in her study of sculpture collections, as late as the sixteenth century *musée* did not appear in any French dictionary.<sup>15</sup> In reviving the liberal arts, the humanists self-consciously placed themselves in the grove of the Muses, creating 'museums' as they did so, to stress their direct ties with ancient wisdom. 'Almost all other rich men support servants of pleasure,' wrote Marsilio Ficino to Lorenzo de' Medici regarding his patronage of humanists, 'but you support priests of the Muses.'<sup>16</sup> References to the Muses are abundant in the texts of

the fourteenth and fifteenth centuries. 'The woodland pleases the Muses,' observed Petrarch, 'the city is hostile to the poets.'<sup>17</sup> The attitude that decreed it necessary to separate oneself from public life in order fully to engage in intellectual activity—a monastic ideal translated into the language of humanism—persisted well into the sixteenth century. As Augustine queried of Petrarch in their imagined dialogue in Petrarch's *Secretum*:

Do you remember with what delight you used to wander in the depth of the country? . . . Never idle, in your mind you would ponder over some high meditation, with only the Muses as your companions—you were never less alone than when in their company . . .<sup>18</sup>

For Petrarch and his contemporaries, the image of the Muses, and concomitantly of *musaeum*, was directly tied to their personal and collective attempts to enter the world of antiquity, regardless of temporal and physical constraints.

More than the claims of erudition or the revival of classical texts through philology, humanism was structured around the objects that served as a basis for most intellectual and cultural activities. Whether it was the Roman ruins that occupied Ciriaco d'Ancona and Francesco Colonna,<sup>19</sup> which gradually emerged as more than just a clutter of objects to define 'antiquity' from the late fourteenth century onwards, or the jumble of natural objects that served as the basis for a new reading of nature in the works of Renaissance natural philosophers such as Aldrovandi, Cesalpino, Gesner, and Mattioli, the philosophical programmes that constituted Renaissance humanism could not have existed without the proliferation of artefacts that provided food for thought. Humanism was primarily an archaeological enterprise in the sense that it reified scholarship by translating vague antiquarian and philosophical concerns into specific projects, whose existence was predicated upon the possession of objects. From this perspective, the proliferation of museums in the sixteenth and seventeenth centuries can be seen as a logical outcome of the desire to gather materials for a text. The pursuit and revival of classical language, literature, and philosophy that have most commonly been identified as the core of the humanists' programmes could not have arisen without the recognition that the piles of information, scattered throughout the world, might be shown to mean something were they to be brought into the study and compared: collecting was about the confrontation of ideas and objects, as old cosmologies met new ways of perceiving, that fuelled

the learned and curious discourses of early modern Europe.

More importantly, the museum fulfilled the new sense of history as sketched by the humanists. 'Antiquity' could only serve as a reference point to 'modernity' once the two had been defined as being inherently more 'advanced' (and therefore compatible) than the intermediary period that Petrarch would call the Middle Ages. Thus the direct link between contemporary museums and the ancient *musaeum* stressed the classical images of erudition and learning to reinforce the image of the Renaissance as a newly constituted version of the etymologically ordained home of the Muses.

Reviewing the classical literature on *musaeum*, it is evident that the idea of collecting was simultaneously an open and a closed concept. While gardens and groves were museums without walls, unlocatable in time or even place, the conflation of study with *musaeum* spatially confined it. The comparative and taxonomic functions of humanist collecting needed a defined space in which to operate, in part to identify the producers of and the audience for the museum, that is, the intellectual elite of the Renaissance who identified themselves as patrons of learning; thus *musaeum* was a locating principle, circumscribing the space in which learned activities could occur.

The growth of humanist circles in the courts, churches, academies and publishing houses of fifteenth- and sixteenth-century Europe signalled the beginnings of a more social and contemporaneous setting for the Muses. Praising the writing of Lorenzo de' Medici inspired by the 'vernacular Muses', the philosopher Giovanni Pico della Mirandola clearly delineated the difference between professional and amateur notions of scholarship within a humanistic framework. 'To them [Dante and Petrarch] the Muses were their ordinary and principle employment,' remarked Pico, 'to you, an amusement and a relaxation from cares.'<sup>20</sup> Developing the Ciceronian theme of intellectual activity as the complement of and ideal preparation for the *vita activa*, Pico lauded Lorenzo's ability to combine *studium* with *otium*.

By the sixteenth century, museums as studies proliferated throughout Europe, claiming direct inheritance from their classical antecedents. Perhaps the most explicit example of the Muse-Museum analogy occurred in the decoration of Paolo Giovio's museum near Como. Built on the supposed ruins of Pliny's fabled villa at Borgo Vico between 1538 and 1543, Giovio's *museo* fulfilled its classical paradigm to the letter and became the prototype for many other

museums which followed. Visiting the villa shortly after its completion in 1543, Anton Francesco Doni wrote to Agostino Landi of its wondrous contents. He particularly praised 'a most miraculous Room depicting all of the muses one by one with their instruments . . . [which] . . . one calls properly the Museum.'<sup>21</sup> Equally we can point to Leonello d'Este's *studio* at Ferrara, decorated with images of the Muses, or Federigo da Montefeltro's *Tempietto delle Muse*, strategically located below his famous *studiolo* at Urbino.<sup>22</sup> In all of these instances, form revealed function; for the images reinforced the contemplative and literally 'museal' purpose of the rooms.

The culmination of this phase of humanism, emphasizing the dialectical relationship between active and contemplative purposes of study, is best illustrated by a famous and often-cited passage from Machiavelli. In a letter of 1513 to the Florentine ambassador to Rome, Francesco Vettori, Machiavelli elegantly suggested the ways in which his personal relationship with the study of antiquity shaped his intellectual and political life. Describing his daily activities in exile, Machiavelli underscored the facility with which he translated his *persona* from one context to another:

In the morning, I get up with the sun and go out into a grove that I am having cut; there I remain a couple of hours to look over the work of the past day and kill some time with the woodsmen, who always have on hand some dispute either among themselves or among their neighbours . . . When I leave the grove, I go to a spring, and from there into my aviary. I have a book in my pocket, either Dante or Petrarch or one of the minor poets, as Tibullus, Ovid and the like. I read about their tender passions and their loves, remember mine, and take pleasure for a while in thinking about them. Then I go along the road to the inn, talk with those who pass by, ask the news of their villages, learn various things, and note the varied tastes and different fancies of men . . . In the evening, I return to my house and go into my study [*scrittoio*]. At the door I take off the clothes I have worn all day, mud spotted and dirty, and put on regal and courtly garments. Thus appropriately clothed, I enter into the ancient courts of ancient men, where, being lovingly received, I feed on the food which is mine alone and which I was born for; I am not ashamed to speak with them and to ask the reasons for their actions, and they courteously answer me. For four hours I feel no boredom and forget every worry; I do not fear poverty, and death does not terrify me. I give myself completely over to the ancients.<sup>23</sup>

What is particularly interesting to note here is the way in which Machiavelli utilized both the pastoral and monastic ideals of *musaeum*, interspersing his



moments of intellectual reprieve with more sociable practices, to develop one of the most politically aware statements of the early sixteenth century, *The Prince* (1514).

Yet at the same time it is obvious that he considered his study an inner sanctum—‘*cubiculum secretius, ubi quis studio vel scripturae vacat*’, as Du Cange described it.<sup>24</sup> More closely, Machiavelli’s *scrittoio* resembled the *cubiculum* in which Poggio Bracciolini conducted his studies of antiquity in the early fifteenth century.<sup>25</sup> Like Tasso’s Malpiglio, Machiavelli entered his *studio* to flee the multitude (*fuggir la moltitudine*).<sup>26</sup> We are still far from the institutional ideal of cultural activity as connoted by the current use of museum. None the less it is important to note the specific grounding of intellectual (or rather museum-like) activities in the context of the *studio*. ‘I wish to bring together all of my books, writings and materials for study [*cose da studio*],’ wrote the prelate and papal nuncio Ludovico Beccadelli in 1555 to his cousin, who was planning a *studio* for Beccadelli’s secretary, Antonio Giganti, upon his return to Bologna. Later in the century, the humanist Giganti described his collection as ‘my *studio*, more than *studio* one calls it a collection of various foreign and natural trinkets.’<sup>27</sup> For the sixteenth- and seventeenth-century humanists and collectors, more than their predecessors, it was the explicit identification between *musaeum* and *studio*, and a number of other terms discussed below, that shaped the social and ultimately the public function of the museum.

### Encyclopaedic Strategies

At first instance, the Renaissance notion of museum defined imaginary space. Born of the humanist desire to codify the intellectual experience of the self-proclaimed scholar, it was a methodological premise that translated itself into a wide variety of social and cultural forms.

One of the most important intellectual traditions with which the practice of collecting aligned itself was that of encyclopaedism. While the medieval encyclopaedic tradition emphasized knowledge as a continuum, an unbroken plane of information, the sixteenth- and seventeenth-century encyclopaedic tradition delighted in discontinuities.<sup>28</sup> Nowhere was this more evident than in the structure of the museum. Using the term *musaeum* as a starting point, we can trace the foliation of this structure, as word after word from the encyclopaedic corpus—theatre, treasure, mirror, forest, and microcosm to list only a

few—became identified with the language of collecting. My purpose here is to relate the presence of museums to the explosion of encyclopaedic traditions, both old and new, that supported and shaped the activity of collecting through the explicit identification of *musaeum* with encyclopaedic paradigms.

On a more abstract level, the process of widening the horizons of *musaeum* operated in a fashion similar to the premise of the Renaissance encyclopaedia. *Musaeum* became the axis through which all other structures of collecting, categorizing, and knowing intersected; interweaving words, images, and things, it provided a space common to all.<sup>29</sup>

The use of the term *musaeum* was not confined only to the tangible; museum was foremost a mental category and collecting a cognitive activity that could be appropriated for social and cultural ends. As an ironic comment on the construction of collections in the late seventeenth century, Sir Thomas Browne created a guidebook to an imaginary museum entitled the *Museum Clausum, or Bibliotheca Abscondita* (‘The Enclosed Museum or Secret Library’). ‘I am Bold to present you with a list of a collection, which I may justly say you have not seen before.’<sup>30</sup> Dismissing the encyclopaedic projects of Aldrovandi, Gesner, Kircher, and other subscribers to the Aristotelian and Plinian paradigms, Browne invoked the mental structure of collecting to attack its premise, creating a museum so complete and so closed that no one had ever penetrated it. Filling in the gaps in his hypothetical museum of knowledge with improbable marginalia—a cross made out of a frog’s bone, the works of Confucius in Spanish and the like—he criticized the epistemological framework of the museum which gave a macrocosmic gloss to every object it encountered. ‘I have heard some with deep sighs lament the lost lines of Cicero; others with as many groans deplore the combustion of the library of Alexandria: for my own part, I think there be too many in the world, and could with patience behold the urn and ashes of the Vatican.’<sup>31</sup>

In asking ourselves to what extent the language of collecting penetrated other activities, we need first to consider the fact that the descriptive models of collecting co-opted the linguistic paradigms of encyclopaedism. Certainly the expansion of categories such as *teatro* and *cornucopia*, words relevant in a much more general context which initially held little or no meaning for collecting, suggests that the collectors of the sixteenth and seventeenth centuries drew on a broad humanistic heritage in developing more precise and differentiated ways to articulate the

experience of *musaeum*. A museum was not the only 'theatre of nature'; Kircher described Sicily in exactly the same words due to the natural diversity and fecundity that he observed in his visit to the island during the eruption of Vesuvius in 1660.<sup>32</sup> From the same perspective, the microscope was 'both receptacle and Theatre of the most miraculous Works of Nature' because the lens created a panoramic effect, reinforcing the relativity between museum as theatre and the *theatrum mundi*.<sup>33</sup>

The language of collecting during this period also supported the conflation of museum and theatre. Francesco Calzolari's natural history collection was a museum because it was gathered 'dum uno in teatro, aut Musaeo.' Or as Giovanni Porro wrote of the museum in the botanical garden at Padua, 'And in this little Theatre, almost a little world, one will orchestrate the spectacle of all of nature's wonders.'<sup>34</sup> Similarly the ideal of a *studio* was a closed space: a room without windows that achieved completeness through closure.<sup>35</sup>

*Musaeum* was a classificatory structure for a wide variety of texts, whose sorting and organizing processes fulfilled the taxonomic principle of collection. Numerous books—ranging from collections of poetry such as Lorenzo Legati's *Musei Poetiarum* (1668) to Mabillon and Germain's famous guidebook, the *Museum Italicum* (1687–89)—utilized the image of museum to denote the process of compiling and collating.<sup>36</sup>

Similarly the logic of collecting supported the use of parallel structures to describe the mental process of collecting. In 1549 Ulisse Aldrovandi (1522–1605) was called to Rome on suspicion of heresy. Quickly cleared of the charges, Aldrovandi spent the rest of the year exploring the ancient ruins of the city. The resulting book, *Delle statue romane antiche* (1556), was one of the first guidebooks to antiquarian collections in Rome. Reflecting on the process of writing the treatise, Aldrovandi emphasized the ways in which the creation of the book itself had taken the shape of a 'museum' (*scrivere et raccogliere, come in un Teatro*).<sup>37</sup> Written and collected in the 'theatre' or rather museum of the mind, Aldrovandi's words gave expression to the breadth of the encyclopaedic spirit that guided the collecting projects of the sixteenth and seventeenth centuries.<sup>38</sup>

Emphasizing the diversity, variety, and above all the copiousness of the *Museum Hermeticum* (1678), the anonymous editor assured his readers that they were about to enter a museum of alchemy that reduced the literature on this subject to a manageable entity.<sup>39</sup>

Similarly the emerging scientific journals often included words such as 'repository', 'collection', and 'museum' in their titles to underline the reductive nature of the enterprise, for the pages formed intellectual walls in the same way that the perfect shape of the theatre closed and completed a concept. If a dictionary, a collection of words, could be called a *galleria di parole*, as the first Crusca vocabulary was, then it was evident that almost any book which functioned in a similar manner would also fall under the rubric of 'museum'.<sup>40</sup>

The language used to describe museum catalogues best illustrates the flexible relationship between text and context. If nature, for example, was the text from which the Renaissance naturalists chose their materials, then their museums were literally the 'con-texts'; likewise the textuality of the artefacts was borne out by the catalogues which described and represented them. The apothecary Ferrante Imperato was described by contemporaries as the 'author of so rich and celebrated a Museum'—an authorship attested not only by the publication of his *Historia naturale* (1599), but more concretely by the existence of his theatre of nature. Aldrovandi described his fellow collector Calzolari's catalogue as 'his printed Museum', again to distinguish it from the equally tangible one that he visited in Verona in 1571; similarly Kircher's assistant Gaspar Schott asked for the *Galleria descritta* while writing his book on universal magic. The Milanese cleric Manfredo Settala, on the other hand, distinguished between his 'vernacular Museum' and his Latin museum as texts for two different types of audiences.<sup>41</sup> The catalogue as 'a reduced Museum' or 'little Museum' functioned as the museum's own microcosm.<sup>42</sup> The encyclopaedic process was one that needed to unfold from beginning to end; like Russian dolls or Chinese boxes, there was always the anticipation of an even smaller, overlapping version of the preceding object.

Beyond museum catalogues, most collectors understood their writings to belong to the larger vision of the encyclopaedic enterprise. Remarking on the richness of Hernandez's descriptions of Mexican flora and fauna, which had recently come into the possession of the Accademia dei Lincei, Marc Welser commented that the manuscript 'merits the name of treasure [*thesoro*] and not of book'. The founder of the same academy, Federico Cesi, described his own research as a 'Theatre of Nature', a term most frequently used for the natural history collections of the period.<sup>43</sup>

Aldrovandi designated his own publication

schemes as 'the history of my Museum'. At times his manuscripts were referred to more simply as the *musaeum* itself, and they were certainly remarked upon by visitors as being one of the richest aspects of his legacy.<sup>44</sup> The text, as *storia*, furnished what the collection could not, completing it in the process. 'Besides what I have lately observed in my Museum, I have also written a history entitled the *Thesaurus rerum naturalium* . . . here one will find all of the things . . . that are not in our Museum.' Urging his brother Francesco to underwrite the publication of Aldrovandi's texts as early as 1576, Ferdinando de' Medici praised the manuscripts as 'almost a part of that *studio*'.<sup>45</sup> The museum was located neither in the text nor in the context; rather it was the interplay between the two that shaped its function and completed its purpose.

Museums were textual structures both in a literal and figurative sense. Created from the materials available to the Renaissance collector, they served as reference points for the reading that the humanist educational programme required of the educated élite. In understanding why a collector acquired or coveted a particular object, one needed to participate in the textual strategy of encyclopaedism. 'Moreover how much light would we glean from interpreting the passages of writers, principally Pliny, if we had in sight those things which he told only with words,' lamented Federico Borromeo in his *Musaeum* (1625).<sup>46</sup> The existence of the museum testified to the memory of the texts which shaped it, creating copies of 'originals' that had long since disappeared.

In a classical and medieval sense, most compendia were museums because, like Pliny's *Natural History* or the medieval encyclopaedias, they compiled and stored knowledge in a comprehensive fashion. As Pliny outlined in the preface to his monumental work:

[It] is not books but store-houses [*thesauros*] that are needed; consequently by perusing about 2000 volumes, very few of which, owing to the abstruseness of their contents [*secretium materiae*] are ever handled by students, we have collected in 36 volumes 20,000 noteworthy facts obtained from one hundred authors that we have explored, with a great number of other facts in addition that were either ignored by our predecessors or have been discovered by subsequent experience.<sup>47</sup>

Such a literal and quantitative schematization was also evident in the acquisitive nature of Renaissance collecting. Surely Aldrovandi's and Gesner's dreams of an alphabetically organized, perfect universe fulfilled (or at least attempted to fulfill) Pliny's

encyclopaedic paradigm. Like Pliny, Aldrovandi was obsessed with the size of his collection; not a week passed without his re-counting the total number of 'facts' he had accumulated. 'If I wanted to describe the variety of fish observed, depicted and dried by me, that can be seen by everyone in our microcosm, truly it would be necessary to consume many pages simply to name them . . .'<sup>48</sup> The collector's activity was one that absorbed him completely; when Jacopino Bronzino described Aldrovandi as 'consumed in the history of natural things'<sup>49</sup> he aptly summarized the encyclopaedic passion for working within one's material, allowing it to absorb the scholar in the process.

'[I am] hoping to see something beautiful in your care,' wrote Aldrovandi to Alfonso Pancio, physician to the d'Este family in Ferrara, 'not ever being sated by the learning of new things. Not a week passes—I will not say a day—in which I am not sent something special. Nor is it to be wondered at, because this science of nature is as infinite as our knowledge.'<sup>50</sup> Drawing upon Pliny's list of Greek titles in the manner of Giovio, Aldrovandi named his largest project, under which all others were to be subsumed, the *Pandechion Epistemonicon*, which he defined as 'a universal forest of knowledge, by means of which one will find whatever the poets, theologians, lawmakers, philosophers and historians . . . have written on any natural or artificial thing one wished to know about or compose.'<sup>51</sup> Throughout the half-century in which Aldrovandi was active as a collector he constantly strove to fill the space he had created. Words, images, and texts were all incorporated into the universal encyclopaedia of knowledge that he visualized.

The omnipresence of Aldrovandi's *pandechion* evidenced itself in his flexible use of the term. Like other encyclopaedic terms, it was a semantic structure organized to include 'not only the notion of abundance itself but also the place where abundance is to be found, or, more strictly, the place and its contents.'<sup>52</sup> On the most general level, Aldrovandi described his collection of objects as a '*cimilarchio* and *pandechio* of the things generated in this inferior world'. Thus the encyclopaedia was tangible, defined by the experiential data which constituted one part of his collection. Although he rarely used this term to refer to any but his own collection, the Tuscan Grand Duke's collection also merited such a name, because it was 'full of an infinite number of experimental secrets'.<sup>53</sup> Not surprisingly, the principle of plenitude was operative in his decision to designate it as an encyclopaedic structure. In similar fashion, the first

cataloguer of Francesco Calzolari's natural history museum in sixteenth-century Verona called it, among other things, a cornucopia.<sup>54</sup> If nature was the 'cornucopian text' which held the interest of the naturalist, then the museum itself was the receptacle of *copia*.

Discussing with Matthias Lobel some of his rare dessicated plants, 'which I conserve pasted in fifteen volumes in my *Pandechion* of nature for the utility of posterity', Aldrovandi reiterated the textual nature of the artefacts, which became 'books' organized according to his taxonomy of nature. 'For a full supply of facts [*copia rerum*] begets a full supply of words', counselled Cicero.<sup>55</sup>

Most importantly, there was the *Pandechion* proper: eighty-three volumes containing scraps of paper which Aldrovandi and his assistants had meticulously cut and alphabetically organized until 1589.<sup>56</sup> Almost unintelligible to the modern reader, this compendium functioned as a lexicon on almost any known subject. Responding to Lorenzo Giacomini's questions on wine-making in a letter of 1587, Aldrovandi quoted Pliny but could not remember the exact citation. 'But where he [Pliny] teaches it, for now I can't recall, though I have seen it and glossed it from head to foot. And if you were able to run through my *Epistemonicon*, you would have found it and infinite other observations . . .'<sup>57</sup> For Aldrovandi the encyclopaedia was located neither in the text nor in the object alone; rather it was the dialectic between *res* and *verba* that fully defined the universality of his project.

### The Jesuits put their World in Order

While Aldrovandi's encyclopaedic schemes confined themselves to the territory that the Aristotelian corpus had previously defined, his commentary serving as a gloss on predefined categories, the speculations of seventeenth-century natural philosophers moved beyond this realm. In contrast to sixteenth-century encyclopaedism, which attempted to fill the paradigms prescribed by the classical canons, the logic of seventeenth-century collecting precluded such an unmitigated acceptance of earlier categories, particularly because the frustrated attempts of predecessors such as Aldrovandi and Gesner to flesh out ancient collecting projects indicated that new methods needed to be found and new questions needed to be asked.

The influx of artefacts from the New World and other parts of the globe now reached by Europeans paved the way for new models of knowledge, as

collectors found traditional explanations to be increasingly unsatisfactory for the information that they could now incorporate in their museums.<sup>58</sup> Simultaneously, events such as the Reformation and the ensuing religious and political battles waged across Europe from the early sixteenth century until the Peace of Westphalia in 1648, destabilized the social, political, and religious order that had seemed unshakable only a century before (although its roots had certainly eroded long before 1517 in anticipation of these changes). Thus the seventeenth-century natural philosopher, the creator of the new encyclopaedia, was in search of a new model to explain a perplexing, increasingly illogical and pluralistic world.

'How truly enormous is the field of knowledge', exclaimed Federico Cesi, founder of the Accademia dei Lincei at the beginning of the century, 'large in the copiousness of speculations as in the copiousness of readings.'<sup>59</sup> While the activities of Cesi and his academicians aligned themselves firmly with the camp of Galileo and the 'new' science of the period, a response that effectively eliminated the significance of the encyclopaedic project by refashioning it into a heuristic category,<sup>60</sup> the speculations of Jesuits such as Athanasius Kircher (1602–80) and Gaspar Schott took a more eclectic turn. As R. J. W. Evans describes in his study of Habsburg intellectual life, the philosophical trajectories of Catholic Reformation culture lent an exoticism to intellectual discourse that was not evident in scholarship of the previous century.<sup>61</sup> The Jesuit response to the relativity of their world was to expand outward, in ever-increasing concentric circles, incorporating both old and new within a traditional yet flexible framework, as attested by their missionary activities in Europe, the New World and Asia. The quest for *pansophia* reached its apex in the eclectic attempts by the Jesuits (and later, in a different context, Leibniz and Wolff) to develop universal structures that synthesized humanist philosophies and non-Western cultures with the more programmatic and dogmatic policies of the post-Tridentine church.

The encyclopaedic impulse was not confined to the Catholic world alone, although it was undoubtedly more pervasive in an atmosphere in which the retention of ancient models of knowledge was linked to the persistence of orthodoxy and tradition. For the purpose of limiting my study, due to the richness of material on Italian collecting and the readily apparent links between the persistence of encyclopaedic models and the role of collecting in the seventeenth-



century courts and ecclesiastic circles, I have chosen to focus on Catholic collecting rather than looking at both Protestant and Catholic activities together. While I do not believe that collecting and religious affiliation were inevitably intertwined, in many instances—particularly in the case of Kircher in Rome and his contemporary and fellow cleric Manfredo Settala in Milan—religious conviction *did* play a part in the shape and function of seventeenth-century museums.

Spending most of his life in Rome, clearing-house for the Jesuit missionary activities, Kircher was able to draw on the resources of an entire order to sate his thirst for knowledge of non-Western civilizations; books, artefacts, and reports from all corners of the globe flowed into his museum at the Roman College weekly. From these Kircher derived his theories on universal language and the universality of many other aspects of the natural and supernatural world, all part of the Christianizing mission of the post-Tridentine church.<sup>62</sup>

One of his most interesting (and, in the minds of modern Egyptologists, most infamous) projects concerned the decipherment of hieroglyphs. Happening upon a book on the obelisks of Rome, probably the one written by Michele Mercati (keeper of the Vatican mineralogical collection and sculpture garden) in 1589, Kircher recognized the value of the mysterious emblems for his studies of language and religion. 'Immediately my curiosity was aroused and I began to speculate on the meaning of these hieroglyphs', he wrote in his autobiography. 'At first I took them for mere decoration, designs contrived by the imagination of the engraver, but then, on reading the text of the book I learned that these were the actual figures carved on ancient Egyptian monuments. From time immemorial these obelisks and their inscriptions have been in Rome and so far no one has been able to decipher them.'<sup>63</sup>

Like so many other things studied by the Jesuit, the hieroglyphs were signs, richly encoded, that promised to unlock the mysteries of past civilizations and, most importantly from his theological perspective, would prove to be a means of demonstrating the inherent compatibility of Christianity with ancient pagan wisdom. A symbol, Kircher posited, 'leads our mind through a kind of similitude to an understanding of something very different from the things which offer themselves to our external senses; whose property is to be hidden under a veil of obscurity.'<sup>64</sup> Thus Kircher's studies of Egyptian symbols, like his investigations of Chinese philosophy, ciphers and

musical theories of universal harmony, and his attempts to draw forth a theory of universal magnetism or *panspermia* from the natural world, were shaped to fit a hermetic and metaphoric image of the world which assumed that every object was coded with a larger, more universal significance. Applied to the passion for collecting, hermeticism postulated that the museum would be a visually coded presentation of occult knowledge. The world itself was a tangled web of meanings; it remained only for the collector to penetrate its layers through the comparative, taxonomic, and ultimately encyclopaedic nature of his project.

The social configuration of such grandiose projects could only have been the libraries and museums created to organize and assimilate the explosion of knowledge experienced by the sixteenth and seventeenth centuries. What was a *bibliotheca* but a collection of books, a 'multitudo librorum' as Comenius defined it?<sup>65</sup> Libraries formed an essential part of collections; rarely did a museum not have a library attached to it.<sup>66</sup> Carlo Antonio del Pozzo's library in Rome was described as a 'true hotel of the Muses', reinforcing the idea that the library was indeed a museum; likewise the Medici library in Florence was described by Diderot as so copious that 'only the [term] *musaeum Florentinum* can justly represent this magnificent cabinet.'<sup>67</sup>

While the emergence of public libraries during the seventeenth and eighteenth centuries signalled the creation of a public sphere of reading, as Roger Chartier has argued,<sup>68</sup> truly the most magnificent examples of book collecting remained the private libraries of papal Rome, and in general those within the monastic orders throughout Europe, as evidenced by the Biblioteca Angelica in Rome and the Bibliothèque de Sainte Geneviève in Paris.<sup>69</sup> The papal *nipote* Francesco Barberini, favourite of Urban VIII and an active member of Cesi's Lincean Academy, amassed a collection that was still the wonder of Rome a century later. 'There are other wonderful libraries in Rome,' observed Diderot after surveying the Vatican holdings, 'particularly that of Cardinal Francesco Barberini, which is reputed to contain 25,000 printed volumes and 5000 manuscripts.'<sup>70</sup> Barberini's collection of books, as well as art and natural objects, was so well known that scholars vied with each other to give him their books. Over the course of several years the Paduan Aristotelian Fortunio Liceti presented Barberini with his most recent publications, hoping that the Cardinal would honour him by making place for them in his 'most

noble Museum'.<sup>71</sup> As Liceti recognized, Barberini's collection was truly a *musaeum*, his own small offering about to be subsumed within its universal and universalizing structure.

Not surprisingly, collectors who prided themselves on their ability to organize knowledge also turned their attention to the classification of books. Aldrovandi, for example, dissected the subject organization of libraries with the same passion that he catalogued nature and every other part of the human experience. Like the Swiss naturalist Conrad Gesner, Aldrovandi perceived his encyclopaedia of nature to be dependent on his more general encyclopaedia of knowledge itself. Thus bibliographies were hoarded as if the names of the books themselves symbolically conveyed the possession of their contents.<sup>72</sup>

Strategies for collecting were not only designed to fulfil the humanistic desire for *prisca scientia*: museums and libraries of this period also conveyed political and religious messages. Claude Clemens, librarian to Philip III of Spain, described the Escorial as 'this Museum of Christendom'; attuned to the rhetoric of the Catholic Reformation he proposed a library that collected and ordered knowledge in order to control it. Not only were libraries necessary for their public utility for a growing community of scholars; they also protected the Catholic world from false erudition.<sup>73</sup> In an age in which even the Jesuits had been refused their privilege to use prohibited books that had not been corrected by the official censors (though one wonders how Kircher was able to transgress this rule), there was a great fear of information falling into the wrong hands. A number of times during his career, Aldrovandi had to submit his library for Inquisitorial inspection, and found many of his books—those by Cardano, Della Porta and Pomponazzi for example—confiscated as a result.<sup>74</sup>

The encyclopaedic vision of knowledge, born of the humanist desire to recapture the knowledge of the ancient world, was used for a variety of purposes by the seventeenth century. The museum had become not only an instrument of erudition, but a means for proselytizing. While Kircher's brand of intellectual pyrotechnics was undoubtedly too eclectic (and potentially philosophically dangerous) for the mainstream Catholic Church, none the less his work was allowed to coexist alongside more orthodox philosophy in an atmosphere fraught with the tension of the Galileo condemnations.<sup>75</sup> While we cannot pretend to do anything more than speculate on the reasons for such laxity, it is possible that the Church, already overly dependent on the Jesuit educational

programme, recognized the social value of a highly public figure such as Kircher, even if they were suspicious of the intellectual premise of his research. Most importantly, Kircher's willingness to submit all of his findings to a strictly hierarchical notion of the universe, was in keeping with the Thomist basis of the Jesuit teachings.

From the universal strategies of the sixteenth-century natural philosophers such as Aldrovandi, Cardano, and Gesner to the Christian strategies of their seventeenth-century counterparts within the Catholic Church, the museum was designed as the most complete response to the crisis of knowledge provoked by the expansion of the natural world through the voyages of discovery and exploration, the concomitant explosion of information about the world in general and, more particularly, the moral and social imbalance created by the religious and political events of the sixteenth and seventeenth centuries. In an age of religious plurality, to 'know' was fraught with tensions; the humanist response of Aldrovandi and his contemporaries was to be open to any available strategy for framing the world, an openness that frequently brought them into trouble with the institutional church, as attested by Aldrovandi's, Cardano's and Della Porta's brushes with the Inquisition and the actual condemnations of Bruno and Campanella.<sup>76</sup> The seventeenth-century response diffused potentially 'black' magic through the purification rituals of the Jesuit scientific work in the case of Kircher and his disciples, subsuming natural philosophy to Christian theology, while still leaving the encyclopaedic framework intact. This was most apparent in the structure of museums which, until the end of the eighteenth century, continued to conjoin art and nature in fulfillment of Pliny's premise that everything in this theatre of the world was worthy of memory. From mental to textual to actual museums, the structure of *musaeum* was designed to intermingle harmoniously the natural and the artificial, the real and the imaginary, and the ordinary and the extraordinary, to underscore not only the fecundity of the universe but the breadth of the human faculties for comprehending and explaining the *theatrum mundi*.

#### Texts and Contexts: Defining Museal Space

Returning to an earlier theme—how did the museum make the transition from private to public?—we need to re-enter the social world of collecting to trace briefly the development of the 'public' museum. While Machiavelli, encamped in his *scrittoio*, con-

ceived his intellectual pursuits to be a means of re-entering public life *in absentia* through the medium of literature, he did not conceive of scholarship *per se* as a socially-grounded enterprise. Despite the imprint of the Alexandrian museum as a paradigm of collective intellectual activity, manifested in the formation of humanist circles around the *musaei* of Pietro Bembo and Guillaume Budé for example, the idea of study outside of the university *studio* was predominantly an isolated and isolating process.<sup>77</sup> In contrast to the notion of the academy, one of the most important centres for extra-university intellectual and cultural activity from the sixteenth century onwards (whose emergence was distinct from the museum though later influential in its institutionalization), the museum was at first defined by the domestic, and therefore private, space which it inhabited.<sup>78</sup>

In his will of 5 March 1604 the apothecary Francesco Calzolari left 'the *studio di antichità* that is in my house in Verona' to his nephew.<sup>79</sup> Certain aspects of collecting reinforced the notion that a museum needed to be circumscribed by domestic activity. 'And he who delights in letters must not keep his books in the public study [*scrittoio comune*], but must have a *studiolo* apart, in the most remote corner of the house. It is best and healthy if it can be near the bedroom, so that one can more easily study.'<sup>80</sup> Surviving plans for late Renaissance museums support such an organization. The *studio* of Antonio Giganti in Bologna, secretary to Ludovico Beccadelli and to Gabriele Paleotti and a friend of Aldrovandi, testifies to the conscious placement of a collection within the interior space of a house; its only entrance was the 'door that opens into the bedroom'.<sup>81</sup> The collector, called by the Muses, retired to his study in the same way that he retired to his bedroom. Similarly *cabinet*, as it evolved in seventeenth-century French, connoted the closet beyond the main bed-chamber.<sup>82</sup> As Carlo Dionisotti points out, however, the distinctions between public and private need to be considered with care in order to understand their relevance for the early modern period; a bedroom, theoretically the most intimate of spaces, was not fully private, nor for that matter was a museum.<sup>83</sup>

Advice to construct museums, libraries and studies in proximity to the most 'personal' space in the home drew not only on contemporary experience with the arrangement of such rooms, but also on Alberti's classically inspired designs. Describing the layout of a country house in his *Ten Books on Architecture* (1415), Alberti specified that 'The Wife's Chamber should go into the Wardrobe; the Husband's into the

Library.'<sup>84</sup> While Alberti sharply defined the *studio* as exclusively masculine space, an image borne out by the relative absence of women in the sphere of collecting, we can point to several noteworthy exceptions—the *Grotta* and *studiolo* of Isabella d'Este at Mantua being one of the most famous examples.<sup>85</sup> For the most part, however, collecting emerged out of a private and domestic culture that was almost exclusively male: a space reserved within the home for scholarly activity (analogous to the contemplative space of the private family chapel) whose purpose was not entirely divested of public life. A museum was created as much for self-promotion as out of genuine interest in the artefacts assembled in it: in this respect it was at once public and private, masculine space within the domicile, and therefore by nature public in the broadest sense of the term.<sup>86</sup>

The museum, as *orbis in domo*, mediated between public and private because it quite literally attempted to bring the world into the home. The endless flow of goods, information, and visitors that appeared on the doorsteps of the most well-known museums determined that the collections of the sixteenth and seventeenth centuries could no longer be the hidden worlds suggested by medieval and monastic images of *studium*.<sup>87</sup> 'If after the arrival of my scribe, Giovan Corneglio, I have not responded to your letter as quickly as you wished,' wrote Aldrovandi to the humanist Giovan Vincenzo Pinelli from his museum, 'Your Most Illustrious Signor will excuse me for having been continuously occupied in various negotiations, public as well as private.'<sup>88</sup> The antiquary Giovan Vincenzo della Porta, 'a man no less learned than unusual for the vast knowledge which he possesses', was singled out for 'having through his own efforts created a most noble Museum to which scholars come from the furthest corners of Europe, drawn by its fame.'<sup>89</sup> As we know from the inventories of his brother's home in 1615, the Della Porta collections were indeed private yet open spaces, publicized through the informal networks of correspondence that formed the basis of the scientific and intellectual communities of late Renaissance Europe. In asking ourselves how did the 'private' become 'public' we need to dissect the sociological process of collecting that identified collectors to each other as well as for a larger audience.<sup>90</sup>

The constellation of terms used to describe collecting by the late sixteenth century created a unified conceptual sphere that fully demonstrated the museum's roles in the public and private realms. By now 'study' connotes a room for private study with

'museum' as its public counterpart. Yet the polarization of these two categories has evolved only in the nineteenth and twentieth centuries, as the images of 'public' and 'private' have also become fixed opposites. Conversely, as discussed earlier, it was only in the fifteenth and sixteenth centuries that the social and philosophical purposes of museum and *studio* were conjoined; it remained for the seventeenth and eighteenth centuries to begin the process of extraction that ultimately set the two words apart. Aldrovandi's collection of natural rarities in Bologna was called simultaneously *museo*, *studio*, *theatro*, *microcosmo*, *archivio*, and a host of other related terms, all describing the different ends served by his collection and, more importantly, alluding to the analogies between each structure.<sup>91</sup> In the mid-seventeenth century, Ovidio Montalbani, superintendent of the Studio Aldrovandi, distinguished between the public Aldrovandi collection which he oversaw (*Museum*) and his personal, and therefore private, collection through the use of the diminutive (*privatum Museolum*; *Museolum meum*).<sup>92</sup>

As Claudio Franzoni suggests in his study of antiquarian collecting, one of the most important linguistic divisions within the vocabulary of collecting concerns the distinction between terms which defined a collection spatially and those which alluded to its philosophical configuration.<sup>93</sup> Words such as *stanza*, *casa*, *casino*, *guardaroba*, *studiolo*, *tribuna*, *galleria*, organized the domestic and civic terrain of the museum. 'One can truly call your *Casino* a house of nature, where so many miraculous experiments are done', wrote Aldrovandi to Francesco, alluding to the Grand Duke's domestication of nature in his alchemical laboratory at San Marco.<sup>94</sup> The famous collection of Flavio Chigi in seventeenth-century Rome was described as a 'room of curiosities'; again the collection was defined by the space which it inhabited as well as by the nature of its contents.<sup>95</sup> Through a similar process, the idea of *musaeum* became associated increasingly with the physical space of the *studio*. Many letters of the sixteenth and seventeenth centuries, most notably those of Aldrovandi and Cesi, are signed 'ex Musaeo nostro' or 'written from the Cesi museum'.<sup>96</sup>

Equally intriguing is the well-documented confusion over the naming of the famous *studiolo* of Francesco I (1569–87) in Florence. The humanist Vincenzo Borghini, who designed the literary *topoi* of the room, called it a *stanzino*, 'by which I mean that it serves as a wardrobe [*guardaroba*] of things rare and precious both for their value and for their craftsman-

ship'. As Lina Bolzoni and Scott Schaefer have pointed out, the room was most often identified as *stanzino* or *scrittoio* by contemporaries.<sup>97</sup> *Studiolo*, a microcosm of museum, described a cabinet, the *Kunstschränk* that populated the Renaissance courts of northern Europe. 'The Grand Duke has had an ebony *studiolo* made of his own design, which is composed according to all of the rules of Architecture', wrote Raffaello Borghini.<sup>98</sup> Thus the *studiolo* was literally a piece of furniture, not unlike a *cassone* in its function, containing the treasures of its owner in miniature; accordingly it was located within a domestic context, albeit a courtly one, and therefore reinforced the private image of collecting.

The transformation of *studiolo* from a domestic concept to a more public one perfectly illustrates the ways in which the museums of the late Renaissance continued to incorporate both private and public notions of space in their conception and utilization. While the *studiolo* of Federico da Montefeltro at Urbino served largely personal functions and the *Grotta* of Isabelle d'Este, entered only through her *studio*,<sup>99</sup> was secreted within the palace at Mantua, the *studiolo* of Francesco I operated in both contexts. Situated in the Palazzo Vecchio in Florence, the seat of government, off the *Sala Grande* and leading into the private family chambers, it was a striking transition point: a room in which the Grand Duke could seclude himself without entirely leaving the realm of public affairs.<sup>100</sup> Yet, on the whole, Francesco's study was more private than public; very few descriptions exist of it because few people—besides the court humanist Borghini who designed the original iconographic program of its *invenzioni*, Vasari, and the other artists who worked on the room—were ever allowed access to it. Surrounded by the political intrigues of the Tuscan court, the *studiolo* and its contents were for the Grand Duke's eyes alone.

The privatizing tendencies of *musaeum* in a court context created hermetic space. From a social perspective, the princely *studio* was hermetic because its function was exclusionary. Equally, museums were hermetic because they were primarily intellectual rather than social constructs, fabricated out of the eclectic humanistic schemes of the Renaissance *virtuosi*. 'Museum is a place where the Scholar sits alone, apart from other men, addicted to his Studies, while reading books', wrote Comenius.<sup>101</sup> Scholarship was a process which absorbed its participants (*studiis deditus*) and the locus of study, the museum, created an impermeable physical barrier between the



scholar and the outside world.<sup>102</sup> Even as late as the eighteenth century, an age in which the museum had truly become a public spectacle, illustrations of museums reinforced their image as secretive and engrossing environments.<sup>103</sup> Interestingly enough, the most important and elaborate of the *scrittoii* built by Vasari for Cosimo I between 1559 and 1562 was called, among other things, the *scrittoio segreto* and seems to have been the main precursor to his son Francesco's *studiolo*.<sup>104</sup> From this perspective, the scholar, as frequenter of the museum, was as much alchemist as humanist, enhancing his reputation by the hidden nature of his work.

The conflicting demands of the civic and hermetic notions of a museum, both different strands of the humanistic goals of collecting, allowed the museums of the sixteenth and seventeenth centuries to vacillate between openness and closure, depending on the individual goals of their creators. Explicitly contrasting his own civic designs for a chemical laboratory with Tycho Brahe's aristocratic laboratory and astronomical observatory at Uraniborg, the chemical philosopher Andreas Libavius placed the discourse on secrecy versus openness within its scientific context:

Thus we are not going to devise for him [the ideal natural philosopher] just a *chymieion* or laboratory to use as a private study and hideaway in order that his practice will be more distinguished than anyone else's; but rather, what we shall provide for him is a dwelling suitable for decorous participation in society and living the life of a free man, together with all the appurtenances necessary for such an existence.<sup>105</sup>

Libavius's attack on the private *studio* indicated his participation in, and more importantly awareness of, the debate on secrecy versus openness that entered a wide range of discursive practices in the early modern period.<sup>106</sup> The laboratory, argued Libavius, was a civic and not an aristocratic construct; thus the museum had to answer to the humanistic and later Baconian notions of utility that placed knowledge within the public sphere through its service to society.

The advent of printing and the development of an expanding literate culture outside of the courts, universities and the church signalled the decline of the notion of intellectual privacy presupposed by the medieval and, to a lesser extent, Renaissance notion of collecting. By the seventeenth century the museum had become more of a *galleria* than a *studio*: a space through which one passed, in contrast to the static

principle of the spatially closed *studio*. Describing the importance of Aldrovandi's collecting projects to Vincenzo Campeggi, one of the *gonfaloniere* of Bologna, Fra Giovanni Volura praised 'his Theatre of nature, visited continuously by all of the scholars that pass through here . . .'<sup>107</sup> The civic notion of museum placed it in motion; forever opening its doors to visitors, the museum as *galleria*—a term standardized by the public character of the Galleria degli Uffizi and made linguistically normative through the Crusca dictionaries of the seventeenth and eighteenth centuries—was the antithesis of the hermetic and individually defined *studio*, ironically promoted by the same creators of the former category.

The *gallerie* of Kircher and Settala in seventeenth-century Rome and Milan perfectly exemplified this addition to the tropes of collecting, for the two museums were mentioned in most of the major travel journals of the day as 'must-sees' on the serious traveller's itinerary. '[N]o foreign visitor who has not seen the museum of the Roman College can claim that he has truly been in Rome', boasted Kircher.<sup>108</sup> The *galleria* was set in motion by the constantly changing selection of objects as well as visitors that continuously filled the space it created—public in conception, due to the expanded realm of sociability that the museum promised and to the open-ended nature of the contents that it revealed to the gaze.

Despite frequent avowals of the utilitarian ends of the museum, made particularly by scientific collectors, it is obvious that the emergence of a public strategy of collecting did not fully eclipse the private one. Unlike the Medici, Aldrovandi and Kircher depended on patronage for the survival of their projects, and this patronage most often came from rulers who themselves had a personal interest in collecting. While Aldrovandi proclaimed that his *studio* was 'for the utility of every scholar in all of Christendom', borne out by its accessibility during his lifetime and by the donation of the museum to the Senate of Bologna in 1603, he had nothing but praise for the more self-serving activities of his patron Francesco I.<sup>109</sup>

In defining a collection as 'public' versus 'private', what sort of criteria can we use that would be applicable to an early modern context? Certainly museums such as those of Aldrovandi, Kircher, and Settala were not public in the sense that they were open to people from all walks of life. The first museum to proclaim its fully public status was the Ashmolean Museum at Oxford, which opened its doors in 1683. Given to the university by Elias Ashmole, a dabbler in

chemistry, magic, and natural philosophy, the accessibility of the collection was remarked upon with disfavour by certain educated visitors in the seventeenth and eighteenth centuries. 'On 23 August we wished to go to the Ashmolean Museum,' wrote the German traveller Zacharias Conrad von Uffenbach in 1710, 'but it was market day and all sorts of country-folk, men and women, were up there (for the *leges* that hang upon the door *parum honeste & liberaliter* allow everyone to go in). So as we could have seen nothing well for the crowd, we went down-stairs again and saved it for another day.'

Von Uffenbach's displeasure at the literal openness of the Ashmolean translated into pointed comments about the general definition of 'public' institutions in England. Not only did the open admission standards disintegrate the gender and class barriers that defined the private, hence exclusive, nature of the museum—'even the women are allowed up here for a sixpence'—but the establishment of the price of admission commodified the experience of scholarship. His experience in the 'world-famed public library of this University', the Bodleian, only confirmed his worst fears about the dangers of the public in a scholarly setting:

But as it costs about eight shillings and some trouble to gain an entrance, most strangers content themselves with a casual inspection. Every moment brings fresh spectators of this description and, surprisingly enough, amongst them peasants and women-folk, who gaze at the library as a cow might gaze at a new gate with such noise and trampling of feet that others are much disturbed.<sup>110</sup>

The pinnacle of his trip to England, a visit to the famed Royal Society, provoked equal disillusion. Finding the Society and its museum to be in complete disarray, Von Uffenbach commented on the inevitability of its state.

But that is the way with all public societies. For a short time they flourish, while the founder and original members are there to set the standard; then come all kinds of setbacks, partly from envy and lack of unanimity and partly because all kinds of people of no account become members; their final state is one of indifference and sloth.<sup>111</sup>

The discomfort of Von Uffenbach and other visitors with the public agenda of Baconian science only reinforced the perception that the relationship between private and public that existed on the continent, as far as education was concerned, was more subtly gradated. 'In Italy one finds hardly any fully public museums', commented Michael Bernhard Valentini in his *Museum museorum* (1714).<sup>112</sup> Beyond

Valentini's distinction between rulers and 'Privat-Personen', museums such as Aldrovandi's *studio* were 'public' because they were open to any scholar with an appropriate introduction or to anyone of exalted rank. '[Everything in my museum] is seen by many different gentlemen passing through this city, who visit my *Pandechio di natura*, like an eighth wonder of the world', boasted Aldrovandi. In many instances visitors arrived with a letter of introduction. 'This [man] is my dear friend,' explained Alfonso Cataneo, professor of medicine and natural philosophy at the University of Ferrara, to Aldrovandi, 'whom I have directed to Your Excellence upon his arrival in Bologna, since he is a doctor and a gentleman, worthy of seeing certain little things [*cosette*] that interest him. I know that you will not neglect to show him the usual courtesy for love of me.'<sup>113</sup>

The humanist notion of utility also distinguished the public yet inaccessible nature of court collections from the privately owned yet open museums of collectors such as Aldrovandi, whose university affiliation gave his collection a public use through its pedagogical utility, and Kircher, who also conducted experiments and demonstrations in the Roman College museum as part of his teaching duties. The Roman patrician Alfonso Donnino cited his 'desire for public good' as one of the reasons for the gift of his collection to the Roman College in 1651.<sup>114</sup> Equally Filippo Bonanni, Kircher's eventual successor as keeper of the Jesuit science museum, praised the British collector James Petiver for making his private museum public through the publication of his *Centuries*, inexpensive guidebooks to his ever-expanding natural history collection.<sup>115</sup>

Certainly Aldrovandi's desire for the establishment of a *Biblioteca pubblica* was prompted by a sense of civic obligation. 'And therefore, wishing that my many labours be continued after my death, for the honour and utility of the City, and so that they may not have been for nothing, I have elected to conserve this Museum and Library of printed books and my own works, leaving it to the most Illustrious Senate of Bologna . . .'<sup>116</sup> The Senate, responding in kind, transferred Aldrovandi's collection to their most public building to underline its part in the *res publica* of the city. In 1660, when the Bolognese senator Ferdinando Cospi requested that his own collection be added to the civic museum, the decree ratifying this addition described the location as the 'Studio Aldrovando in Pubblico Palatio Bononae'.<sup>117</sup>

The visitors' books that have survived intact provide unique and important documentation on

Aldrovandi's museum as a public institution. Upon seeing the museum in 1604, shortly before Aldrovandi's death, Pompeo Viziano marvelled at the number of people who had visited the naturalist's *studio*:

[I]n two large books, that he conserves among the others, an infinite number of Princes, Cardinals, Prelates, *Cavallieri*, and other people of note [*alto affare et di elevato ingegno*] that have passed through Bologna, attest in their own hand to having seen and diligently considered [the museum] with great satisfaction.<sup>118</sup>

To begin with, it was not common practice in this period to have a list of visitors; most collectors did not have such a well-defined sense of their audience, or more importantly, such a public image of their own posterity through their collections, as to record who had visited their museums. 'Cardinal Enrico Gaetano, legate to Bologna, saw the *mirabilia* of nature in the *studio* of doctor Ulisse Aldrovandi', read one entry for 1587.<sup>119</sup> Besides the book for exalted guests, commemorating their visits, there was also a book which recorded all of the visitors to the museum. Composed mainly of signatures, written on scraps of paper by Aldrovandi, his assistants and the visitors themselves, and later pasted into the sections which organized the names by location and profession, the sheer number of visitors testifies to the Bolognese naturalist's willingness to open up his Theatre of Nature to the world.<sup>120</sup> Aldrovandi, however, not only kept records throughout his lifetime, but specified that the names should continue to be recorded after his death. 'It would also please me', he specified in his gift of 1603, 'if the Gentlemen and Men of Letters who have visited and will visit the Museum after my death will continue to write their names in my two books designated for this purpose.'<sup>121</sup> The visitors' books, rendering a degree of eternity to the museum through the *memoria* of their lists, testified to the public nature of the scientific collecting enterprise, emerging out of the universities, academies, and professional organizations of the doctors and apothecaries in the sixteenth and seventeenth centuries.

While the idea of a fully public museum would not emerge in Italy until the early eighteenth century, with the establishment of the museum of the Istituto delle Scienze under Luigi Ferdinando Marsili's sponsorship, subsuming both Aldrovandi's and Cospi's collection in the process, and the formation of Scipione Maffei's 'public Museum of Inscriptions' in Verona,<sup>122</sup> the collections of the sixteenth and

seventeenth centuries set the stage for this development. During the late Renaissance the parameters of *musaeum* expanded to include more public connotations. No longer simply hidden worlds, a growing number of collections foreshadowed the utilitarian and didactic tendencies of the late seventeenth- and eighteenth-century ideals of the museum. The most obvious change in this realm was the increased institutionalization of the museum, which became a pervasive social artefact in the courts, academies, and universities of early modern Europe. The success of the social grounding of *musaeum* was due in no small part to its coordination with the long and complex intellectual tradition of collecting outlined above. The museums of the late Renaissance mediated between public and private space, straddling the social world of collecting and the humanistic vocabulary which formed its philosophical base. In its ability to transcend cultural and temporal boundaries the museum stood apart from other institutions, synthesizing new cosmologies with old. The synthetic process that forged the Renaissance notion of *musaeum* reflected not only the syncretic abilities of sixteenth- and seventeenth-century culture, emphasizing the flexibility of humanism as a *modus operandi*, but also its desire to collect and be collected. Drawing on Du Cange's false etymological comparison between museum and mosaic, Bonanni defined the newly reconstituted museum at the Roman College. 'Let us say with Du Cange that, since by the word *Opus Mustium dicitur illud quod tessellatum est lapillis variorum colorum*, thus in the places designated to the meanderings of the erudite there may be various things, which not only delight the eyes with the Mosaic, but enrich the mind.'<sup>123</sup> The museum, as mosaic, brought together the pieces of a cosmology that had all but fallen apart in the course of several centuries. Organizing all known ideas and artefacts under the rubric of museum, the collectors of the period imagined that they had indeed come to terms with the crisis of knowledge that the fabrication of the museum was designed to solve.

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*Notes and references*

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1989. I would like to thank Randolph Starn for his criticism and comments on an earlier draft of this paper.

1. C. Clemens, *Musei sive bibliothecae tam privatae quam publicae extractio, cura, usus* (Leiden, 1634), sig. \*4.
2. Regarding the appearance of these and numerous other terms considered analogous to *musaeum*, see L. Berti, *Il principe dello studiolo* (Florence, 1967), pp. 194–5, and L. Salerno, 'Arte e scienza nelle collezioni del Manierismo', in *Scritti di storia dell'arte in onore di Mario Salmi* (Rome, 1963), II, pp. 193–214. Other words that should be considered are *arca*, *cimelarchio*, *scrittoio*, *pinacotheca*, *metalotheca*, *Kunst- und Wunderkammer*, and *Kunstschränk*.
3. J. Baudrillard, *Selected Writings* (ed. Mark Poster) (Stanford, 1988), p. 15. Michel Foucault's comments on 'the vast syntax of the world' also suggest that *musaeum*, as a framework of activity, can be placed within a general framework, stressing resemblance and repetition, that was the main organizational tool of late Renaissance discourse; see his *The Order of Things* (English tr., New York, 1970), p. 18.
4. R. Harbison, *Eccentric Spaces* (New York, 1977). Harbison's notion of an eccentric space implies permeability and fluidity—it is a space specifically designed to hold marginalized information and to be easily reshaped by the particular strategies of its users while still retaining its normative function.
5. See P. Ariès and G. Duby (eds.), *Histoire de la vie privée* (Paris, 1985–7), esp. vols. III–IV; both R. Sennett's *The Fall of Public Man* (New York, 1977) and J. Habermas' *Strukturwandel der Öffentlichkeit* (1962) [French edn.: *L'espace public*, tr. M. B. de Launay (Paris, 1978)] see the eighteenth century as a critical turning point in the expansion of the public sphere. Though little work has been done to elucidate directly the relations between public and private (as opposed to looking at simply one or the other), the inference that can be drawn by comparing the work on private life to that on the public sphere is that the two domains are intimately and necessarily intertwined, something I hope to demonstrate in my discussion of the entrance of museums into the public sphere in the period from the sixteenth to the eighteenth century.
6. Pontificia Università Gregoriana (hereafter PUG), *Kircher*, MS 568 (XIV), f. 143<sup>r</sup> (Trapani, 15 June 1652).
7. Archivum Romanum Societatis Iesu (hereafter ARSI), *Rom.* 138. *Historia* (1704–29), XVI, f. 182<sup>r</sup> (Filippo Bonanni, *Notizie circa la Galleria del Collegio Romano*, 10 January 1716).
8. *Thesaurus Linguae Latinae* (Leipzig, 1936–46), VIII, p. 1702; *Lexicon Totius Latinitatis* (Padua, 1871), III, p. 318.
9. Chevalier de Jaucourt, 'Musée', in *Encyclopédie X* (1765), pp. 893–94.
10. *Ibid.*, *Thes. Ling. Lat.* VIII, p. 1702; C. Neickelius, *Museographia* (Leipzig, 1727), pp. 1–2; J. Alsop, *The Rare Arts Traditions* (New York, 1982), p. 163.
11. *Lex. tot. lat.* II, p. 318; C. T. Lewis and C. Short, *A Latin Dictionary* (Oxford, 1958), p. 1179; Felice Feliciano, in his description of a trip taken by Mantegna and the antiquary Ciriaco of Ancona in 1464 described their arrival at 'greenswards like heavenly gardens in the most delicious dwelling places of the Muses', in C. E. Gilbert, *Italian Art 1400–1500* (Englewood Cliffs, NJ, 1980), p. 180.
12. J. Dixon Hunt, *Garden and Grove: The Italian Renaissance Garden in the English Imagination 1600–1750* (London, 1986); D. Coffin (ed.), *The Italian Garden* (Washington, DC, 1972); L. Zangheri, *Pratolino: il giardino delle meraviglie* (Florence, 1979); M. Fagiolo (ed.), *La città effimera e l'universo artificiale del giardino* (Rome, 1980).
13. Cited in L. Tongiorgi Tomasi, 'Projects for botanical and other gardens: a sixteenth-century manual', *Journal of Garden History* (1983), p. 1.
14. 'Protesta di D. Teodoro Bondini a chi legge', in L. Legati, *Museo Cospiano* (Bologna, 1677), n.p.
15. L. Châtelet-Lange, 'Le "museo di Vanres" (1560). Collections de sculpture et musées au XVIe siècle en France', *Zeitschrift für Kunstgeschichte*, 38 (1975), p. 279; see also Du Cange's definition of museum which, aside from a brief reference to the museum at Alexandria, does not give the term the broad framework alluded to by later definitions.
16. *The Letters of Marsilio Ficino* (New York, 1985), I, p. 28.
17. Petrarca, *Epist.* 2.3.43, in E. Cochrane and J. Kirshner (eds.), *The Renaissance, Readings in Western Civilization* (Chicago, 1986), V, p. 66.
18. *Ibid.*, pp. 51–2.
19. C. R. Chiarlo, "Gli frammenti della sancta antiquitate": studi antiquari e produzione delle immagini da Ciriaco d'Ancona e Francesco Colonna', in *Memoria dell'antico nell'arte italiana*, ed. Salvatore Settis (Turin, 1984), I, pp. 271–87.
20. Giovanni Pico della Mirandola, 'Praise of Lorenzo', in D. Thompson and A. F. Nagel (eds.), *The Three Crowns of Florence: Humanist Assessments of Dante, Petrarch and Boccaccio* (New York, 1972), pp. 148, 152.
21. A. Doni, *Tre libri di lettere* (Venice, 1552), p. 81 (Como, 20 July 1543); see also the conference proceedings of Paolo Giovio: *il Rinascimento e la memoria* (Como, 1985).
22. S. J. Schaefer, *The Studiolo of Francesco I de' Medici in the Palazzo Vecchio in Florence*, unpublished Ph.D. dissertation (Bryn Mawr College, 1976), pp. 116–17; C. Franzoni, "Rimembranze d'infinita cose": le collezioni rinascimentali di antichità', in *Memoria dell'antico nell'arte italiana* (Torino, 1984), I, p. 309.
23. Letter to Francesco Vettori, 10 December 1513 in Cochrane and Kirshner, op. cit. (note 17), pp. 183–4; for the Italian see N. Machiavelli, *Lettere*, ed. F. Gaeta (Milan, 1961), pp. 301–6.
24. Du Cange, 'Scriptorium', in *Glossarium Mediae et Infimae Latinitatis* (Paris, 1846), VI, p. 132. This definition corresponds well with the medieval image of *privatus* as a monastic ideal, as discussed in G. Duby, 'Private power, public power', in P. Ariès and G. Duby (eds.), *A History of Private Life*, tr. Arthur Goldhammer (Cambridge, MA, 1988), II, p. 5.
25. *Epist.*, III, ep. XV to Niccolò Niccoli, in Franzoni, op. cit. (note 22), p. 305; see also *Two Renaissance Bookhunters: The Letters of Poggius Bracciolini to Nicolaus de Niccolis*, tr. P. Gordan (New York, 1974).
26. T. Tasso, 'Il Malpiglio Secondo, ovvero de fuggir la moltitudine', in his *Dialoghi* (ed. E. Raimondi) (Florence, 1958), II, tome 2, esp. pp. 569–70.
27. Parma, Biblioteca Palatina, MS Pal. 1012, fasc. 1, c. 13<sup>r</sup> (Beccadelli to Petronio Beccadelli, 20 October 1555); Florence, Riccardiana, Cod. 2438, parte I, lett. 66<sup>r</sup> (Giganti to Lorenzo Giacomini, Bologna, 11 December 1584); for details of the history of these collections, see G. Fragnito, 'Il museo di Antonio Giganti', in *Scienze, credenze occulte, livelli di cultura* (Florence, 1982), pp. 507–35; L. Lauren-



- cich-Minelli, 'L'indice del Museo Giganti', *Museographia scientifica* 1 (1984), nos. 3-4, pp. 191-242.
28. See L. Thorndike, 'Encyclopedias of the fourteenth century', in his *A History of Magic and Experimental Science* (New York, 1923-41), III, pp. 546-67; R. Popkin, 'Theories of knowledge', in Charles B. Schmitt and Quentin Skinner (eds.), *The Cambridge History of Renaissance Philosophy* (Cambridge, 1988), pp. 668-84.
  29. Foucault, op. cit. (note 3), p. 38.
  30. S. Wilkin (ed.), *Sir Thomas Browne's Works* (London, 1835-6), IV, p. 239.
  31. Sir Thomas Browne, 'Religio Medici', II, p. 35. In an earlier passage (p. 31) he attacked such literary curiosities as 'pieces fit only to be placed in Pantagruel's library'.
  32. A. Kircher, *The Vulcano's: or Burning and Fire-Vomiting Mountains . . . Collected for the most part out of Kircher's Subterraneous World* (London, 1669), p. 34.
  33. Legati, op. cit. (note 14), p. 215.
  34. G. B. Olivi, *De reconditis et praecipuis collectaneis* (Verona, 1584), p. 2; G. Porro, *L'orto dei semplici di Padova* (Venice, 1591), sig. +5'.
  35. This was particularly true of Francesco's *studiolo*, though it is also evident in the design of other studies.
  36. Legati, professor of Greek at the University of Bologna, discussed his 'Museo delle Poetesse' in his correspondence with the Tuscan scientist Francesco Redi; Florence, *Laurenziana*. Redi, 222, c. 34' (22 November 1667) and c. 42 (27 April 1668).
  37. Biblioteca Universitaria, Bologna (hereafter BUB), *Aldrovandi*, MS 21, III, c. 428'. For the details of Aldrovandi's brush with the Inquisition, see G. Olmi, *Ulisse Aldrovandi: Scienza e natura nel secondo Cinquecento* (Trento, 1976), pp. 44-66, *passim*; C. Renato, *Opere, documenti e testimonianze* (ed. A. Rotondo) (Florence, 1968), pp. 224-7 (Frammenti del processo di Ulisse Aldrovandi).
  38. C. Vasoli, *L'Enciclopedia del Seicento* (Naples, 1978), esp. p. 27.
  39. *Museum Hermeticum* (Frankfurt, 1678), preface, n.p.; 'De hac vera transmutatione metallorum, quae solo Elixire seu lapide philosophorum perficitur, hic nobis potissimum sermo est, de quo etso multorum authorum libri exstant, ut hic ipse liber Musaeum hermeticum nuncupatum, qui iam aliquot abhinc annis in lucis prodiit, attamen cum haud parva authorum chemicorum sit copia, magnaue scriptorum diversitas & varietas, ita ut unus altero clavus & apertius scribat, aliusq.'
  40. D. Kronick, *A History of Scientific and Technical Periodicals* 2nd edn. (Metuchen, NJ, 1976), p. 27; G. Nencioni, 'La "Galleria" della lingua', in Paola Barocchi (ed.), *Gli Uffizi: quattro secoli di una galleria* (Florence, 1983), I, pp. 18, 34.
  41. Stelluti, *Persio*, p. 170, quoted in G. Gabrieli, 'L'orizzonte intellettuale e morale di Federico Cesi', *Rendiconti della R. Accademia Nazionale dei Lincei* ser. 6, 14 (1938-9), fasc. 7-12, pp. 678-9; 'La vita d'Ulisse Aldrovandi (1586)', in L. Frati (ed.), *Intorno alla vita e alle opere di Ulisse Aldrovandi* (Imola, 1907), p. 16; PUG, *Kircher*, MS 567 (XIII), f. 45 (Herbipoli, 16 June 1657); Florence, Biblioteca Nazionale, *Magl. Cl. VIII*, 1112, c. 13 (Settala to Magliabecchi, Milan, 11 March 1665).
  42. L. Moscardo, *Note ovvero memorie del Museo del Conte Moscardo* (Verona, 1672), sig. SSS3r; Bondoni, 'Protesta', in Legati, op. cit. (note 14), n.p.
  43. G. Gabrieli, 'Il Carteggio Linceo, I', *Memorie della R. Accademia Nazionale dei Lincei. Classe di scienze morali, storiche e filologiche* (hereafter *Cart. Linc.*), ser. 6, 7 (1938), fasc. 1, p. 168 (Welser to Faber, 29 July 1611); *ibid.* II, (1939), p. 778 (Cesi to Faber, 19 November 1622); Calzolari's collection, for example, was called a *rerum . . . omnium naturalium Theatrum* by its cataloguers B. Ceruti and A. Chiocco, in *Musaeum Franc. Calzolarii* (Verona, 1622), p. 97.
  44. BUB, *Aldrovandi*, MS 21, IV, c. 33'; MS 92, c. 11'; see also A. Sorbelli, 'Contributo alla bibliographia di Ulisse Aldrovandi', in Frati, op. cit. (note 41), p. 72, which produces an agreement between Aldrovandi and his printers 'di fare stampare l'istoria del Museo d'esso signor Aldrovandi in Bologna'.
  45. BUB, *Aldrovandi*, MS 70, c. 66'; Florence, Archivio di Stato, *Mediceo del Principato*, f. 689, c. 1, in S. De Rosa, 'Alcuni aspetti della "committenza" scientifica medicea prima di Galileo', in *Firenze e la Toscana dei Medici nell'Europa del '500* (Florence, 1983), II, p. 713.
  46. A. Quint, *Cardinal Federico Borromeo as a Patron and Critic of the Arts and his Musaeum of 1625* (New York, 1986), p. 233; I have modified her translation somewhat to make it more readable.
  47. Pliny, *Natural History*, tr. H. Rackham (Cambridge, MA, 1938), I, p. 13 (pref., 17-18).
  48. U. Aldrovandi, 'Discorso naturale' (1572-3), c. 511', in S. Tugnoli Pattaro, *Metodo e sistema della scienze nel pensiero di Ulisse Aldrovandi* (Bologna, 1981), p. 184.
  49. BUB, *Aldrovandi*, MS 136, XXVIII, c. 126'. (Viadanae, 29 June 1599).
  50. Modena, Archivio di Stato, *Archivio per le materie. Storia naturale*, busta 1. Aldrovandi to Panzio (Bologna, 16 December 1577).
  51. O. Mattiolo, 'Le lettere di Ulisse Aldrovandi a Francesco I e Ferdinando I', *Accademia Reale delle Scienze di Torino* (1903-4), p. 381 (Letter to Ferdinando, 1588); regarding the origins and use of the term *Pandechion*, see Pliny, *Natural History*, pref., 28, p. 15, where he discusses the *πανδέκται* ('Hold-alls'); Lewis and Short, op. cit. (note 11), p. 1296. It is important to note that the idea of a forest, a *selva universale*, was a common trope in the language of sixteenth- and seventeenth-century natural philosophy. It was used frequently, for example, by Tommaso Garzoni, as P. Cerchi notes in his *Enciclopedia e politica della riscrittura: Tommaso Garzoni* (Pisa, 1980), cf. 32-3; equally, Zenobio Bocchi's botanical garden and museum at the Gonzaga court in Mantua was described by contemporaries as a *naturalium rerum selvam*; Ceruti and Chiocco, op. cit. (note 43), sig. \*4'.
  52. T. Cave, *The Cornucopian Text: Problems of Writing in the French Renaissance* (Oxford, 1979), p. 6. I have taken this passage from his discussion of the definition of *copia* which defined not only plenitude but also functioned as *thesaurus*.
  53. BUB, *Aldrovandi*, MS 91, c. 522'; Venice, Biblioteca Marciana (hereafter BMV) *Arch. Mor.* 103 (= *Marc.* 12609), f. 9.
  54. Olivi, op. cit. (note 34), sig. ++4', p. 2.
  55. Cicero, *De oratore* III.xxi.125, quoted in Cave, op. cit. (note 52), p. 6.
  56. BUB, *Aldrovandi*, MS 105; Pattaro, op. cit. (note 48), p. 15.
  57. Florence, *Ricc. Cod.* 2438, I, f. 1' (Bologna, 27 June 1587).
  58. L. Laurencich-Minelli, 'Museography and ethnographical collections in Bologna during the sixteenth and seventeenth centuries', in O. Impey and A. MacGregor (eds.),

- The Origins of Museums* (Oxford, 1985), pp. 17–23; M. Hodgen, *Early Anthropology in the Sixteenth and Seventeenth Centuries* (Philadelphia, 1964); D. Lach, *Asia in the Making of Europe* (Chicago, 1972).
59. F. Cesi, 'Del natural desiderio di sapere et istituzione de' Lincei per adempimento di esso', in M. L. Biagi and B. Basile (eds.), *Scienziati del Seicento* (Milan, 1980), p. 48.
  60. Lynn Joy's comments on Gassendi, as a man between the humanistic and Galilean-Cartesian models of knowledge, are particularly suggestive and convincing; see her *Gassendi the Atomist: Advocate of History in an Age of Science* (Cambridge, 1987).
  61. R. J. W. Evans, *The Making of the Habsburg Monarchy: An Interpretation* (Oxford, 1979).
  62. *Ibid.*, p. 429; D. Pastine, *La nascita dell'idolatria: l'Oriente religioso di Athanasius Kircher* (Florence, 1978), p. 112.
  63. In C. Reilly, *Athanasius Kircher S.J. Master of a Hundred Arts 1602–1680* (Studia Kircheriana, Band I) (Wiesbaden, 1974), p. 38.
  64. A. Kircher, *Oedipus Aegyptiacus* (Rome, 1652–4), ii, I, classis I, p. 6, quoted in Evans, op. cit. (note 61), p. 437.
  65. J. Comenius, *Orbis sensualium pictus* (London, 1659), p. 193.
  66. See, for example, Ceruti and Chiocco, op. cit. (note 43), p. 721; P. Terzago, *Musaeum Septalianum* (Tortona, 1664), p. 151: 'Atque dicendum de bibliotheca non immerito, quod Dei, & scientiarum prorsus omnium recondat mysteria, de Musae, quod artis & naturae contineat arcana ...'
  67. G. P. Bellori, *Nota delli musei, librerie, gallerie, et ornamenti di statue e pitture ne' palazzi, nelle case, e ne' giardini di Roma* (Rome, 1664), p. 45; D. Diderot, 1751, 'Bibliothèque', in *Encyclopédie*, I (Paris, 1751), p. 235.
  68. See R. Chartier, 'Urban reading practices 1660–1780', in *The Cultural Uses of Print in Early Modern France* (Princeton, 1987), pp. 183–239.
  69. See Diderot's survey of libraries to the eighteenth century in the *Encyclopédie*, and C. du Molinet, *Le cabinet de la bibliothèque de Sainte Geneviève* (Paris, 1692).
  70. Diderot, op. cit. (note 67), I, p. 235.
  71. Biblioteca Apostolica Vaticana (hereafter BAV), *Barberini Lat.* 6467, f. 64 (Padua, 5 September 1642); see also ff. 64–5 (28 May 1641 and 8 November 1642) and f. 51 (21 May 1635): 'restera servito di honorarmi a farle haver luogo nel suo Museo'.
  72. BUB, *Aldrovandi*, MS 97, cc. 440–3; see also his *Bibliologia* (1580–1), MS 83 and his *Bibliotheca secundum nomina authorum*, MS 147.
  73. Clemens, op. cit. (note 1), pp. 2–4, 523; Pietro Redondi observes in his *Galileo Heretic*, tr. R. Rosenthal (Princeton, 1987), pp. 80–1: 'As instruments of intellectual monopoly, the great libraries created at the beginning of the century expressed the strength and prestige of traditional humanist and theological culture, which was forging new instruments of erudition and exegesis: the most modern weapons for sustaining, on all intellectual fronts, the effort of Catholic reform and religious struggle.'
  74. The Jesuit privilege to censor their own books was revoked by the College of Cardinals in 1596; Thorndike, op. cit. (note 28), V, p. 151; BUB, *Aldrovandi*, MS 136, XXV, c. 122' (*Index librorum quos concessit Ulyssi Aldrovando SS. Inquisitio romano*, June/July 1596) and cc. 135'–7' (*Catalogus librorum prohibitorum meorum datus Episcopo et Inquisitori*).
  75. William Ashworth's remarks on the problems of defining a 'Catholic' science and also on the church's attack on natural magic and, to a more limited extent, alchemy, represent the most useful overview of science, theology, and the institutional church in the post-Tridentine era, in his 'Catholicism and Early Modern Science', in D. Lindberg and R. Numbers (eds.), *God and Nature: Historical Essays on the Encounter between Christianity and Science* (Berkeley and Los Angeles, 1986), pp. 136–66.
  76. See note 37; there is an extensive literature on heresy and natural philosophy; Thorndike, op. cit. (note 28), 8 vols.; L. Amabile, *Il Santo Officio dell'Inquisizione in Napoli* (Citta di Castello, 1892); Tommaso Garzoni, for example, was accused of discussing authors prohibited by the *Index* in his *Piazza universale* (1585), an example of the sort of indiscriminate curiosity that got many other natural philosophers in trouble; Cerchi, op. cit. (note 51), p. 43.
  77. Châtelet-Lange, op. cit. (note 15), pp. 279–80; Franzoni, op. cit. (note 22), p. 333.
  78. As Duby notes in his 'Private power, public power' (op. cit. (note 24), p. 3), *priver* means to domesticate. There is an extensive literature on academies in Early Modern Europe, so only a few of the most basic works are indicated here: E. Cochrane, 'The Renaissance academies in their Italian and European setting', in *The Fairest Flower* (Florence, 1985), pp. 21–39; *ibid.*, *Tradition and Enlightenment in the Tuscan Academies 1690–1800* (Chicago, 1961); M. Maylender, *Storia delle accademie d'Italia*, 5 vols. (Bologna, 1926–30); F. Yates, *The French Academies of the Sixteenth Century* (London, 1947).
  79. U. Tergolina-Gislanzoni-Brasco, 'Francesco Calzolari speciali veronese', *Bollettino storico italiano dell'arte sanitaria* 33 (1934), fasc. 6, p. 15.
  80. B. Cotrugli, *Della mercatura e del mercato perfetto* (1573), p. 86, quoted in Franzoni, op. cit. (note 22), p. 307; Du Cange's definition of *studiolum*—'Cellula, museum, conclave, ubi studetur. Gall. *Cabinet d'Etude*: museolum, scrinia, *Estudiale* dicimus'—also gives several examples that locate the museum next to the bedroom (Du Cange, op. cit. (note 24), VI, p. 395).
  81. Milan, Biblioteca Ambrosiana, MS S. 85, sup., f. 235' (*Forma dello studio*, 1586).
  82. C. R. Hill, 'The cabinet of Bonnier de la Mosson (1702–1744)', *Annals of Science* 43 (1986), pp. 148–9. A glance at the *Encyclopédie* article on 'cabinet' confirms its entry into the public sphere a century later.
  83. C. Dionisotti, 'La galleria degli uomini illustri', in V. Branca and C. Ossola (eds.), *Cultura e società nel Rinascimento* (Florence, 1984), p. 452.
  84. L. B. Alberti, *Ten Books on Architecture*, tr. James Leoni (1715), ed. J. Ryckwert (London, 1956) [V. 17], p. 107; Pliny the Younger's description of his villa at Laurentium [*Epist.* II. 17] places his own library/study near the bedrooms.
  85. See C. M. Brown, "'Lo insaziabile desiderio nostro di cose antique": new documents on Isabella d'Este's collection of antiquities', in C. H. Clough (ed.), *Cultural Aspects of the Italian Renaissance* (New York, 1976), pp. 324–53. Saint Catherine of Siena, another exceptional woman, also had a *studio* in which she composed her voluminous correspondence. I would like to thank Karen Scott for this information.
  86. J. B. Elshtain, *Public Man, Private Woman: Women in Social and Political Thought* (Princeton, 1981), 3–16, *passim*.
  87. The inscription above Pierre Borel's museum in Castres

- read: 'Siste gradum (curiose) hic enim orbem in domo, imo in Musao, id est microcosmum seuerum omnium rariorum Compendium cernes . . .'; *Catalogue des choses rares de Maistre Pierre Borel* in his *Les Antiquitez, Raretez, Plantes, Mineraux, & autres choses considerables de la Ville, & Comte de Castres d'Albigeois* (Castres, 1649), p. 132.
88. Forli, Biblioteca Comunale, *Autografi Piancastelli*, 51, c. 486<sup>r</sup> (15 June 1595).
  89. BUB, *Aldrovandi*, MS 143, X, c. 284<sup>r</sup>.
  90. Steven Shapin's perceptive analysis of the location of experiment in seventeenth-century British science deals with the transit from private to public, and vice-versa, by similarly considering the spaces in which Royal Society members such as Boyle and Hooke conducted their experiments. His comments on the self-conscious nature of 'publicity' in post-Baconian science further illuminate the background to the contrasting perceptions of the Ashmolean Museum and Continental collections of the seventeenth century discussed later in this paper; see S. Shapin, 'The House of Experiment in seventeenth-century England', *Isis* 79 (1988), pp. 373–404.
  91. References to the interchangeability of terms are voluminous; see, for example, BUB, *Aldrovandi*, MS 38<sup>2</sup>, I, c. 229, c. 259; MS 41, c. 2<sup>r</sup>; MS 136, XXVI, cc. 38–9; Bologna, Archivio di Stato, *Assunteria di Studio. Diversorum*, tome X, no. 6.
  92. O. Montalbani, *Curae analyticae* (Bologna, 1671), pp. 5, 15. The use of the diminutive, a linguistic device that played with the macrocosmic potential of the museum, a world in miniature, appears in other texts as well. G. B. Cavallara, for example, described the Mantuan physician Filippo Costa's collection as *suo Studiolo*; 'Lettera dell'ecce. mo Cavallara', in *Discorsi di M. Filippo Costa* 2nd edn. (Mantua, 1586), sig. Ee.3<sup>r</sup>. Galileo's often-cited comparison between *Orlando Furioso* and *Gerusalemme Liberata*, which described the two works in the language of collecting, disparaged the latter as a *studietto* (as opposed to the *galleria regia* of Ariosto); in Nencioni, op. cit. (note 40), pp. 18–19.
  93. Franzoni, op. cit. (note 22), p. 358.
  94. BMV, *Arch. Mor.* 103 (= *Marciana* 12609), f. 29.
  95. G. I. della Rocchetta, 'Il museo di curiosità del Card. Flavio Chigi seniore', *Archivio della societa romana di storia patria*, ser. 3, 20 (1967), a. 89, p. 141. Gardens, it should be noted, as a subset of the category *musaeum*, also evidenced the same transition from private to public space. The Biblical image of the Garden of Eden, a closed and perfect space, and the allegorical image of the *hortus conclusus* were transformed in the sixteenth and seventeenth centuries into the more open image of *selva*, the forest whose contents were limitless.
  96. Milan, Biblioteca Ambrosiana, MS D. 332 inf., ff. 68–9 (Aldrovandi to Asciano Persio, 17 November 1597); BUB, *Aldrovandi*, MS 21, IV, c. 347<sup>r</sup>; *Cart. Linc.*, I, p. 403; 1942, III, pp. 1046, 1076.
  97. K. Frey, *Der literarische Nachlass Giorgio Vasaris* (Munich, 1923–40), quoted in Schaefer, op. cit. (note 22), p. 22 [Borghini to Vasari, 20 September 1569]; L. Bolzoni, 'L'"invenzione" dello stanzino di Francesco I', in *Le Arti nel principato Mediceo* (Florence, 1980), p. 264; Schaefer, op. cit. (note 22), p. 9; R. Borghini, *Il riposo* (Florence, 1584), pp. 610, 635.
  98. Borghini, op. cit. (note 97), p. 610; H. O. Boström, 'Philipp Hainhofer and Gustavus Adolphus's *Kunstschränk* in Uppsala', in O. Impey and A. MacGregor (eds.), *The Origins of Museums* (Oxford, 1985), pp. 90–101.
  99. Franzoni, op. cit. (note 22), p. 311.
  100. Both Lina Bolzoni and Luciano Berti concur on the ambiguity of the *studiolo*'s position; Bolzoni, op. cit. (note 97), p. 264; Berti, op. cit. (note 2), p. 83.
  101. Comenius, op. cit. (note 65), p. 200.
  102. For an interesting discussion and definition of 'absorption', see M. Fried, *Absorption and Theatricality: Painting and Beholder in the Age of Diderot* (Berkeley, 1980), pp. 7–70, *passim*.
  103. See, for example, the frontispiece of Neickelius' *Museographia* (op. cit., note 10).
  104. K. Levin, *A Topological Inversion in the Studiolo of Francesco I* (unpublished MA thesis, University of Colorado, 1982), pp. 9–10.
  105. A. Libavius, *Commentarium . . . pars prima* (1606), I, p. 92, quoted in O. Hannaway, 'Laboratory design and the aim of science: Andreas Libavius and Tycho Brahe', *Isis* 77 (1986), p. 599. As Hannaway notes (p. 585), citing Du Cange, *laboratorium* is a post-classical term, probably of monastic origin, that developed its more modern connotations from the sixteenth century, paralleling the expansion of museum.
  106. See for example, W. Eamon, 'From the secrets of nature to public knowledge: the origins of the concept of openness in science', *Minerva* 23 (1985), pp. 321–47.
  107. BUB, *Aldrovandi*, MS 25, c. 304<sup>r</sup> (8 April 1574); Franzoni, Nencioni, and Dionisotti note how the entry of *galleria* into the language of collecting from French in the late sixteenth century heralded a new spatial framework for the museum, as, according to one contemporary description, 'un luogo da passeggiare'; Franzoni, op. cit. (note 22), p. 335; Cellini describes *galleria* as a *loggia* or *androne* in his autobiography; Dionisotti, op. cit. (note 83), p. 449; the Crusca dictionary did not define *galleria* until 1691; Nencioni, op. cit. (note 40), p. 17; in his work on the fall of public man, Richard Sennett defines 'public' as motion, literally space to be moved through—a definition certainly in keeping with the historical development of *galleria*; Sennett, op. cit. (note 5), p. 14.
  108. PUG, *Kircher*, MS 560 (VI), f. 111 (Kircher to G. B. Olivi, 23 October 1671), quoted in V. Rivosecchi, *Esotismo in Roma barocca: studi sul Padre Kircher* (Rome, 1982), p. 141.
  109. BUB, *Aldrovandi*, MS 34, I, c. 6<sup>r</sup>. Aldrovandi's lack of a clear distinction between public and private activities evidences certain similarities with what Jürgen Habermas, from a Marxist perspective, has described as the first stage in the formation of the 'bourgeois' public sphere, that is, the pre-capitalist exchange of goods and information that coexisted with the established public order; Habermas, op. cit. (note 5), p. 26.
  110. W. H. and W. J. C. Quarrell (eds.), *Oxford in 1710* (Oxford, 1928), pp. 2–3, 24, 31; see M. Welch, 'The foundation of the Ashmolean Museum' and 'The Ashmolean as described by its earliest visitors', in A. MacGregor (ed.), *Tradescant's Rarities: Essays on the Foundation of the Ashmolean Museum* (Oxford, 1983), pp. 41–69. The image of the Ashmolean as the prototype for the 'public' museum appears in the emphasis on this word in contemporary descriptions of it. Borel singled it out as 'Le Cabinet publique' in his list of museums in 1649, alluding to the earlier Tradescant collection that formed the basis (indeed

- the bulk) of Ashmole's gift to Oxford in 1683; the Chevalier de Jaucourt described it as the museum 'that the University had had built for the progress and the perfection of the different branches of knowledge': 'Musée', in *Encyclopédie*, X, p. 894. The entry in the *Oxford English Dictionary* under 'museum', like the Crusca reference to Aldrovandi, underlines the normative function of the Ashmolean in shaping the use of museum in English, as does reference to it in seventeenth- and eighteenth-century dictionaries.
111. W. H. Quarrell and Margaret Mare, *London in 1710* (London, 1934), p. 98.
  112. M. B. Valentini, *Museum museum, oder der allgemeiner Kunst- und Naturalien Kammer* (Frankfurt, 1714), sig. xx2'.
  113. BAV, *Vat. lat.* 6192, vol. 2, f. 657r (Aldrovandi to Cardinal Sirleto, Bologna, 23 July 1577); BUB, *Aldrovandi*, MS 138<sup>2</sup>, c. 37 (Modena, 12 October 1561).
  114. ARSI, *Fondo Gesuitico*, 1069/5, III, no. 1.
  115. British Library, Sloane MS, 4063, f. 231r (Bonanni to Petiver, Rome, 26 December 1703); R. Stearns, 'James Petiver, promoter of natural science ca. 1663–1718', *Proceedings of the American Antiquarian Society*, new ser. 62 (1952), pp. 243–365.
  116. G. Fantuzzi, *Memorie della vita di Ulisse Aldrovandi* (Bologna, 1774), pp. 76, 84.
  117. BUB, Cod. 738 (1071), vol. XXIII, no. 14 (*Decreto per la concessione di una sala al marchese Ferdinando Cospi appresso lo Studio Aldrovandi* [28 June 1660]).
  118. Biblioteca Comunale dell'Archiginasio, Bologna, B. 164, f. 301r (Pompeo Viziano, *Del museo del S.r Dottore Aldrovandi*, 21 April 1604).
  119. BUB, *Aldrovandi*, MS 41, c. 2r (*Liber in quo viri nobilitate, honore et virtute insignes, viso musaeo quod Excellentissimus Ulyssis Aldrovandus Illustriss. Senatus Bononiensi dono dedit, propria nomina ad perpetuam res memoriam scribunt*). The book, however, was started in Aldrovandi's lifetime, since the entries date from 1566—significantly the first signature was Gabriele Paleotti's—until March 1644. 'Ego Carolus Gonzaga die 22. Mensii Aprilis, 1619 et particular gratia D. Co. Pompei Aldrovandi [one of the two executors named in Aldrovandi's will] in visi nobiliss.a haec bibliotheca properata grati animi ergo scripsi' (c. 6).
  120. BUB, *Aldrovandi*, MS 110.
  121. Fantuzzi, op. cit. (note 116), p. 84.
  122. M. Spallanzani, 'Le "Camere di storia naturale" dell'Istituto delle Scienze di Bologna nel Settecento', in W. Tega (ed.), *Scienza e letterature nella cultura italiana del settecento* (Bologna, 1984), pp. 149–83; S. Maffei, *Epistolario (1700–1755)*, ed. Celestino Garibotto (Milan, 1955), I, p. 238 (Maffei to Anton Francesco Marmi, Verona, end of March 1717); p. 273 (Maffei to Muratori, Verona, 20 September 1718).
  123. ARSI, *Rom.* 138. *Historia* (1704–1729), XVI, f. 182r.