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Für Hartmut Böhme

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Vorwort

Der Band *Museum, Bibliothek, Stadtraum. Räumliche Wissensordnungen 1600-1900* geht auf eine Tagung im Sommer 2007 zurück, die im Rahmen des Sonderforschungsbereiches 447 *Kulturen des Performativen* veranstaltet wurde. Das zugrunde liegende Forschungsprojekt hat sich mit Formen räumlicher Organisation und Inszenierung von Wissen auseinander gesetzt und diese wesentlich am frühneuzeitlichen Gedächtnistheater und den Kunst- und Wunderkammern untersucht; beides Modelle der Ordnung und Veranschaulichung von Wissen, die in der Computermoderne eine breite Renaissance erfahren haben. In einem weiteren Schritt ist die Frage nach den räumlichen Bedingungen der Produktion und Rezeption von Wissen auf den Raum der Bibliothek und den Stadtraum übertragen worden, in denen sich ebenfalls imaginäre und materielle Anordnungen von Wissensgegenständen überlagern.

Bibliothek, museale Sammlung und Stadtraum stecken als zentrale Wissensräume der frühen Neuzeit denn auch den Gegenstandsbereich des vorliegenden Bandes ab. In den einzelnen Beiträgen werden neben der Architektur und der Einrichtung dieser Räume Ordnungs- und Darstellungspraktiken ebenso untersucht wie die Kontrollmechanismen, die in räumliche Wissensordnungen eingeschrieben sind.

Zusätzlich zu den Tagungsbeiträgen wurden in den Band aufgenommen die Beiträge von Elisabeth Tiller, Jeanne Peiffer und Raymond-Josué Seckel. Allen Autorinnen und Autoren sei für ihre Mitwirkung an dem Band gedankt. Für die Finanzierung der Tagung und des Tagungsbandes danken wir der Deutschen Forschungsgemeinschaft. Ein weiterer Dank gilt unseren studentischen Mitarbeiterinnen Mirjam Staub und Christine Tams, die uns bei der editorischen Arbeit tatkräftig unterstützt haben.

Die Herausgeber
Berlin, September 2009

Of Gardens and other Natural History Collections in Early Modern Holland. Modes of Display and Patterns of Observation

Claudia SWAN

In 1610 in Leiden a series of four prints representing newly established facilities at the Leiden University were published, each of them engraved by the local artist Willem Swanenburg after designs by Jan Woudanus. This suite of four engravings conveys the likenesses of the fencing school, the anatomical theater, the garden, and the library – four arenas central to the relatively new university community and likewise key to its public representation. (Fig. 1-4) This series has accurately been described as a set of tourist mementoes, geared to consumption by visitors to the university. There is a great deal to be said for these images – for their remarkable compositions (not least the bizarre gravity-defying geometry of the fencing school) and the sense of absolute order with which they imbue these terrains. Moreover, three of these spaces – the library, the anatomical theater, and the fencing school – were carved out, as it were, of a former church, the *Faliede Bagijnkerk*, which had been converted to university uses in the years shortly after its establishment in 1575. The fourth space, that of the garden, is outdoors and was not, in fact, adjacent to the others. But the orderly procession of individuals through its paths and the structured display of its contents lend a spectacular air to this space that is continuous with the overall effect of the other three.

These prints serve as introductory materials here in two senses. On the one hand this paper is about the grid-like and rational organization of study gardens in Holland in the early seventeenth century in particular – and the Woudanus print of the garden demonstrates these characteristics vividly. On the other hand, this paper views gardens as integrally associated with other sorts of collections, primarily collections of natural historical items and other artifacts, and the close connections at Leiden between the garden and the anatomical theater (they were the twin arenas of medical study) are key. The anatomical theater, it is worth recalling, was only used for the purposes of dissection in the winter months and, throughout the rest of the year, was a site for the spectacular display, recorded here by Woudanus

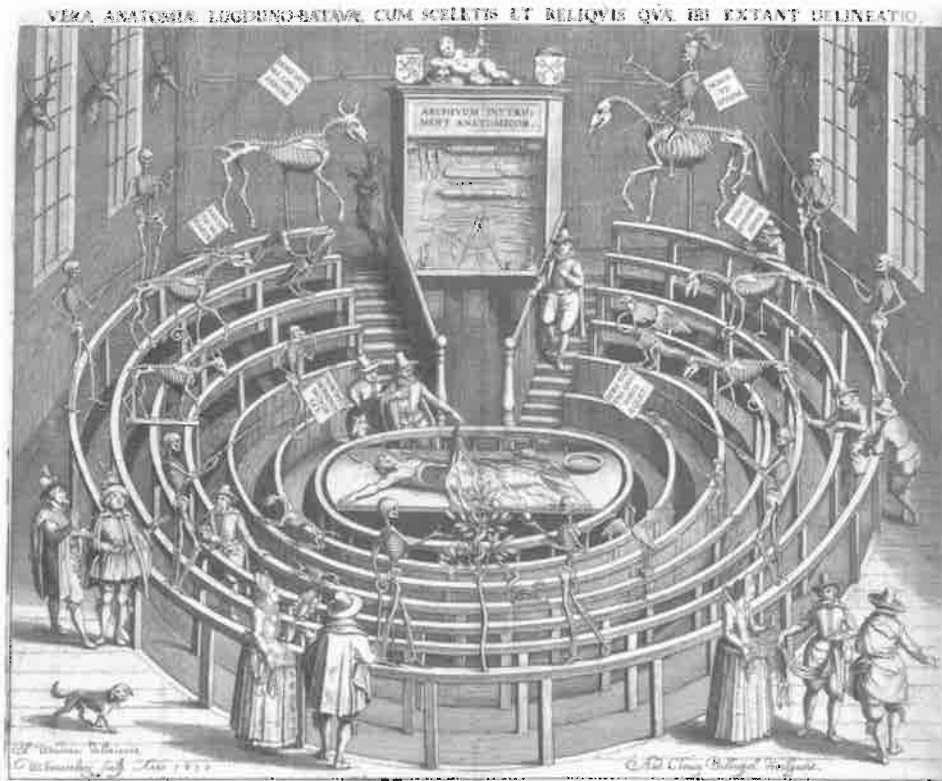


Fig. 1: Willem van Swanenburg after Jan Cornelis van't Woud, "The anatomy theatre of Leiden University", 1610.

in a composite image, of medical and physical wonders in the collection of the university. On a purely visual level, there are also some compelling harmonies among these images. Let me begin again, as it were, by calling out a detail of two of them – from the garden and from the library.

From Woudanus's perspective at least, neither observing the garden nor reading was a private affair. The gentleman leading a woman down the garden path is a somewhat more affable image than that of the two men reading side by side, but the fact remains that the postures of the latter are of a sort one wouldn't expect today to find in many other places aside from bars. Both of these details demonstrate the socialization that these new spaces required and produced. They also illustrate the uses of order – the particular uses of the particular orders that structured such spaces as these. The library is beyond the scope of my paper, but given the theme of this conference and the emphasis of so many of the papers, I thought at least I might refer to the possibility that some of what I want to say here also holds for

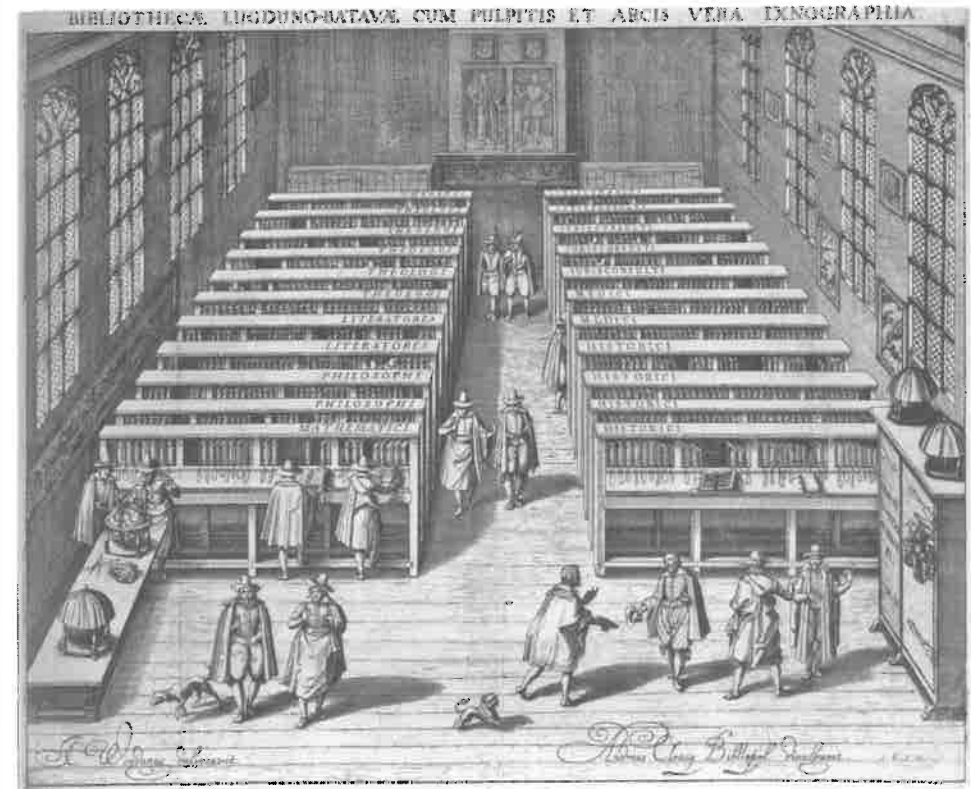


Fig. 2: Willem van Swanenburg after Jan Cornelis van't Woud, "The library of Leiden University", 1610.

the organization and use of libraries in early modern Holland – or, at least, for the very famous library at Leiden.

As in my title, so too in what follows: I want to begin (again) by presenting a few exemplary gardens cultivated in Holland in the early seventeenth century – all of them in Leiden – and then move to principles underlying natural history collections of the same time and place. To my mind there are important links between gardens and natural history collections: the one (gardens) is, I believe, a subset of the other (natural history collections). In the case of the Leiden university garden, these two sorts of collection were co-extensive: in 1599, an 'ambulacrum' was constructed at the back, or western wall of the garden enclosure and according to early inventories this space came to house a wide variety of 'naturalia', indigenous and exotic items, as well as maps and other prints. Moreover, both sorts of spaces accommodated new practices of observation; in most of the cases under review,

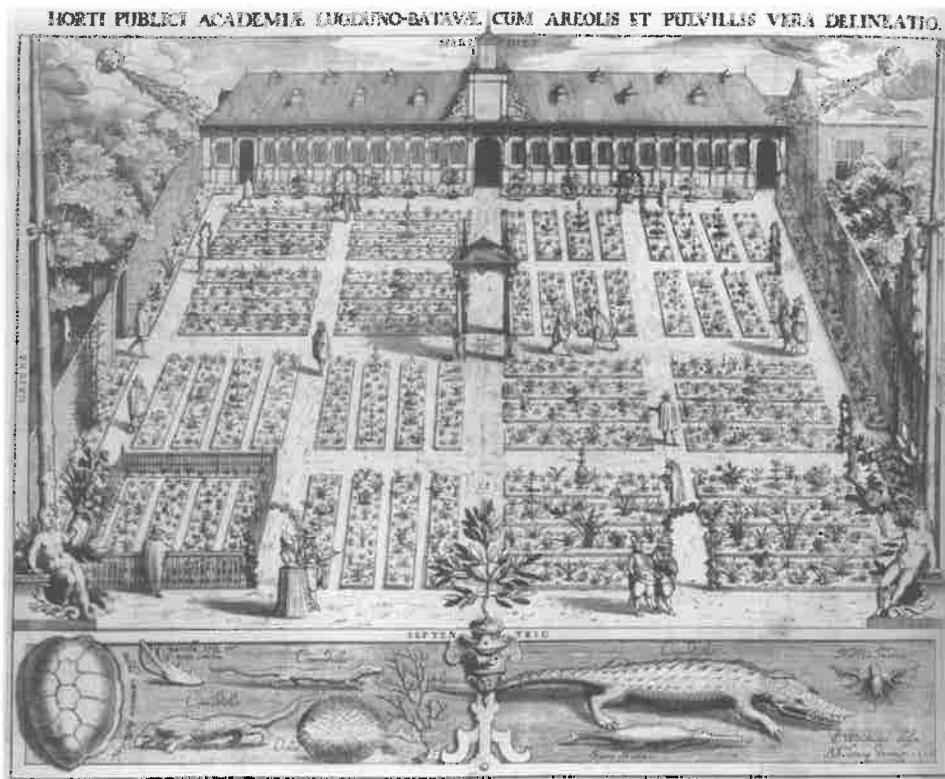


Fig. 3: Willem van Swanenburg after Jan Cornelis van't Woud, "The botanical garden of Leiden University", 1610.

the medical ends of the collections were primary and the spectacle they offered was as much pedagogical as it was wondrous. More on this to come.

Gardens

The Leiden University founded a *hortus* and a *locus anatomicus* in the mid-1590s, and by 1610 both were nationally and internationally celebrated. These new fora for teaching medicine housed spectacular events and installations whose audiences included medical students, students of natural history, and tourists alike. To some degree, their renown derived from their publicity by way of prints of these arenas and of their principal agents. From the first decade of the university's existence, its medical faculty placed concerted emphasis on the kind of empirical study that had by the middle of the sixteenth century become *de rigueur* throughout Europe. Just as Andreas Vesalius (Andreas van Wesele, 1514-1564) instituted

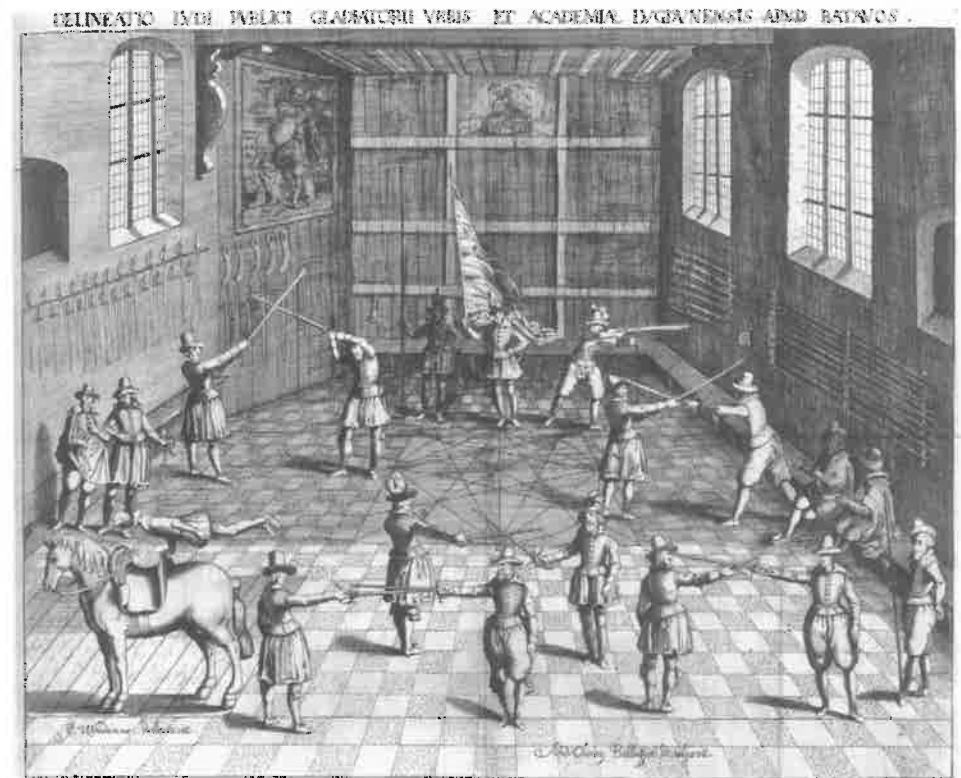


Fig. 4: Willem van Swanenburg after Jan Cornelis van't Woud, "The fencing school of Leiden University", 1610.

a new form of anatomical instruction in which observation and teaching were conjoined, rather than observation serving the purposes of rote repetition of classical precepts, so too did botanical study come to involve direct and sensory study of its objects. Simples (the makings of medicines) were gathered for and by professors of medicine and their students and were cultivated in the gardens newly attached to universities; their properties were demonstrated in the course of lectures. Vesalius's professor at Paris, Jacobus Sylvius (Jacques Dubois, 1478-1555), was the most celebrated lecturer on anatomy in the 1530s; his classes were typically attended by as many as 400 or 500 students, and in effect spawned the subsequent generation of medical studies. In his *Introduction to anatomy*, Sylvius writes:

I would have you look carefully and recognize by eye when you are attending dissections. [...] For my judgment is that it is much better that you should learn the manner of cutting by eye and touch than by reading and listening [...] Reading alone never taught anyone

how to sail a ship, to lead an army, nor to compound a medicine, which is done rather by the use of one's own sight and the training of one's own hands [...].

Sylvius also taught the *materia medica*, and cultivated a medicinal garden of both indigenous and foreign varieties for the benefit of his students, who might learn by inspection and observation.

The Leiden garden and anatomical theater answered the need for hands-on instruction in medicine, of a kind that acquired renewed significance in the later sixteenth century. The two principal agents of medical study and of the use of the new theaters of medical learning, the anatomical arena and the garden, were Pieter Pauw (1564-1617), a native of Leiden and early alumnus of the university, who became a professor of medicine in the late 1580s, and Carolus Clusius (1526-1609).

Clusius was hired as director of the botanical garden in 1592 and arrived there from Frankfurt in 1593. His monumental studies of the natural world – the *Rariorum plantarum historia* (1601) and *Exoticorum libri decem* (1605) – were both published at Leiden. His arrival at Leiden coincides with the opening of the *hortus*, and while there he served as the figurehead the university had more or less desired him to: a man of international renown, he secured the reputation of the garden as it began to take shape, and his broad network of contacts throughout Europe was instrumental in procuring medicinal and exotic varieties of plants. But the actual workings of the garden, and teaching from it, were never Clusius's province. As I have argued elsewhere,¹ this portrait of Clusius by Jacques de Gheyn II serves as a fitting image of a man who acted as figurehead of the garden and no more; who cultivated his own, botanical rather than medical interests and specimens; and who mediated not the use of the garden but its expanding fame as a collection of rare and exotic specimens. (Fig. 5) These are all key aspects of the garden's function in its early years; indeed, it is important to stress that the use of the garden as a more or less experimental arena in which to cultivate plants not only for their pharmaceutical virtues went hand in hand with its daily use, weather and seasons permitting, as a locus of instruction.

This print, also by de Gheyn, represents the garden and its pedagogical use and even includes a portrait of Professor Pauw at work. (Fig. 6) Pauw commissioned the engraving from de Gheyn in 1600 and it was bound (folded) in copies of one of Pauw's publications – a popular handbook for use in the garden called the *Hortus publicus academiae Lugduno-Batavae*, first published in 1601 and fre-

¹ Claudia Swan, *Art, Science, and Witchcraft in Early Modern Holland*. Jaques de Gheyn II (1565-1629), Cambridge 2005, S. 62-64.



In Effigiem Nobilis Doctissimique Viri
CAROLI CLUSII

A TREBATVM decus, & nostri nova gloria fecit
CAROLVS huc Leydis CLVSIVS ora gerit.
Herbarum vitas Orbi dedit ille figurat,
At CLVSI vitam GHEYNIVS effigiem.

BON. VVLCANIJS.

Fig. 5: Jacques de Gheyn II, Portrait Carolus Clusius, 1601.

quently reissued thereafter. *Hortus publicus* is an intriguing little book. It consists of numerous pages of series of printed, numbered quadrants that correspond to the quadrants of the garden as it was planted in 1601. In his preface, Pauw specifies that the book was to be used by filling in the names of the plants growing in the garden as they were demonstrated in the course of instruction. The print of the garden by de Gheyn functions as a highly legible plan of the garden, in which the overall order of planting is clearly indicated, the dimensions of the garden are given at each of the four sides, and the long enclosed gallery that was erected in 1599 at the western-most edge of the garden is also described. The plan would have served to orient users of the handbook as they filled in the contents of the garden in the charts provided within the body of the book. Moreover, the group of men gathered outside the entrance to the gallery are assembled attentively around a central robed figure who points in the direction of the area closest to them with a stick. (Fig. 7) One of the members of the audience looks down at a book he holds in his open hands; either he is comparing the subject of the professor's demonstration with a text or, perhaps, filling in the diagrams in the *Hortus publicus*. This group represents Pauw and students (whether strictly speaking students of medicine or students in the broader sense of the word) in the course of a demonstration in the garden – demonstrating, as Pauw put it in the preface to the *Hortus publicus*, “from bed to bed and area to area [...] the names, etymology, powers, and virtues of the plants, and how they are used in medicine.”

As I have already mentioned, a long gallery ('ambulacrum') was built along one side of the garden in 1599; it was the brainchild of Pieter Pauw. Originally intended to shelter students and visitors from rain and to provide protection for plants during the winter, by the second decade of the century, by which time its floor had also been paved, the Leiden 'ambulacrum' housed a sort of mini-'Wunderkammer', with an emphasis on 'naturalia'. In 1614 the city historian Jan Jansz. Orlers wrote of it that it was “decorated and hung with many and various maps and geographical depictions, as with some foreign animals and plants, brought here from both of the Indies and other places.”² The earliest inventory of the contents of the gallery, which refers to the contents as “curiosities”, records a number of “foreign animals and plants”, some of which may have arrived in the Netherlands on the first Dutch ships to return from the East Indies. They include bamboo stalks ('*Arundo Indica*') presented to the garden by the directors of the Dutch East Indies Company, boxes of resins and extracts, and various fruits or nuts. Animals were more numerous and ranged from crocodiles, penguins, and blowfish to parts of animals – the foot of a casuary bird, a walrus penis, vari-

² Jan Jansz. Orlers, *Beschrijvinge der Stadt Leyden*, Leiden 1614, S. 143f.

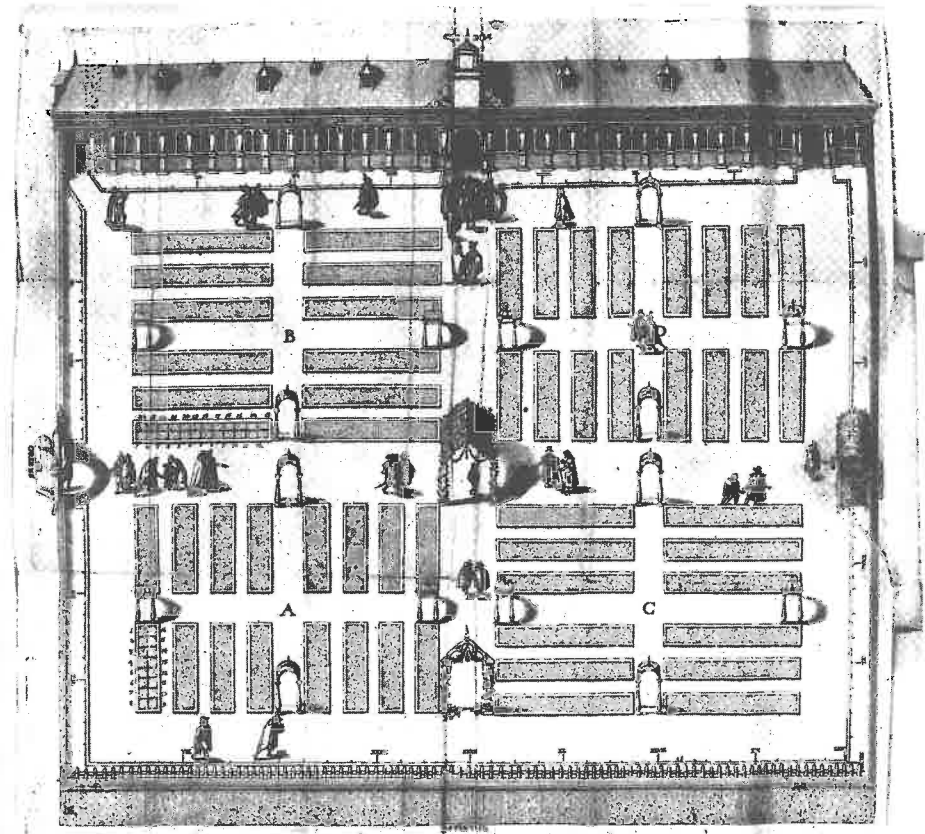


Fig. 6: Jacques de Gheyn II, *Botanical garden of Leiden University, 1601*.

ous parts of a bear, and the “beak of a strange bird”. Ethnographic items are also listed, among them pygmy vestments, two Indian hammocks, an Indian skirt, and an Indian ink pot (Indian as in, from either the West or the East Indies).³ The collection housed in the ‘ambulacrum’ was coextensive with the university garden, which also contained foreign, rare, and valuable specimens. (Fig. 3)

It is my conviction that when Pauw commissioned the engraved plan of the garden from de Gheyn in 1600, he stipulated that it should represent not just the *locus Botanicus*, but the act itself. This becomes clear when we compare de

³ Erik de Jong, *Natuur en Kunst. Nederlandse Tuin. En Landschapsarchitectuur 1650-1740*, Amsterdam 1993, “Inventaris van de Rareyten op de Anatomie en inde twee gallerijen van des Universiteyts Kruythoff,” ca. 1617, pp. 232ff.

Gheyn's engraving with the image of the garden engraved by Swanenburgh after Woudanus in 1610. This view is not, as is de Gheyn's, a plan. The garden is amply planted and contains a number of visitors but of the visitors to the garden, only one is actively studying its contents; he is located in the lower right quadrant and stands examining a book he holds open in his hands. Unlike de Gheyn's print, this one makes reference to the realm of the city and of nature beyond the garden walls; trees and other buildings are visible, as are the ruddy winds. The lower frame of the Swanenburgh engraving contains a number of the items that were housed in the 'ambulacrum' or gallery along the western edge of the garden – a tortoise shell, the jawbone of a bear from Nova Zembla, three animals identified as crocodiles, a blowfish, a coral branch, a swordfish, and a bat. These objects are the objects of curiosity that visitors to the garden came to view. In contradistinction to de Gheyn's print, Swanenburgh's presents and commemorates the materials of the culture of curiosity, rather than the workings of the garden as an arena of institutional medical training.

The juxtaposition or cohabitation of the stuffs of medicine, of practical matter, with wondrous and exotic items and the fact that these sorts of objects were collected and displayed in numbers raises the question of organization. Let me, in order to begin to respond to that question, bring into this account a non-Dutch participant in the international world of early modern natural history – namely, Ulisse Aldrovandi.

Meanwhile in central Italy in the later part of the sixteenth century, the renowned professor of medicine and prolific author Aldrovandi amassed significant collections of all sorts, from (published) monsters to fossils, from plants to drawings. While he arranged, studied, taught, and published as many specimens of the natural world as he could get his hands on – and he got his hands on tens of thousands – he did not find it necessary to offer a systematic mode of organization for them. In the sixteenth century, naturalists resorted regularly and without apology to what subsequent natural historians would take to be arbitrary and convenient modes of organization. The alphabet, for example, was sufficient for Leonhart Fuchs, one of the three so-called 'Fathers of German Botany' and the author of a suite of volumes on the plant world first published in the 1540s. Generally speaking, very broad morphological and/ or Aristotelian classes served as the brackets between which sixteenth- and seventeenth-century naturalists arranged the stuff of nature, which they so eagerly tracked down, studied, observed, dissected, dried, bought, sold, taught, published, and displayed. In 1595, Aldrovandi described his collection as follows:

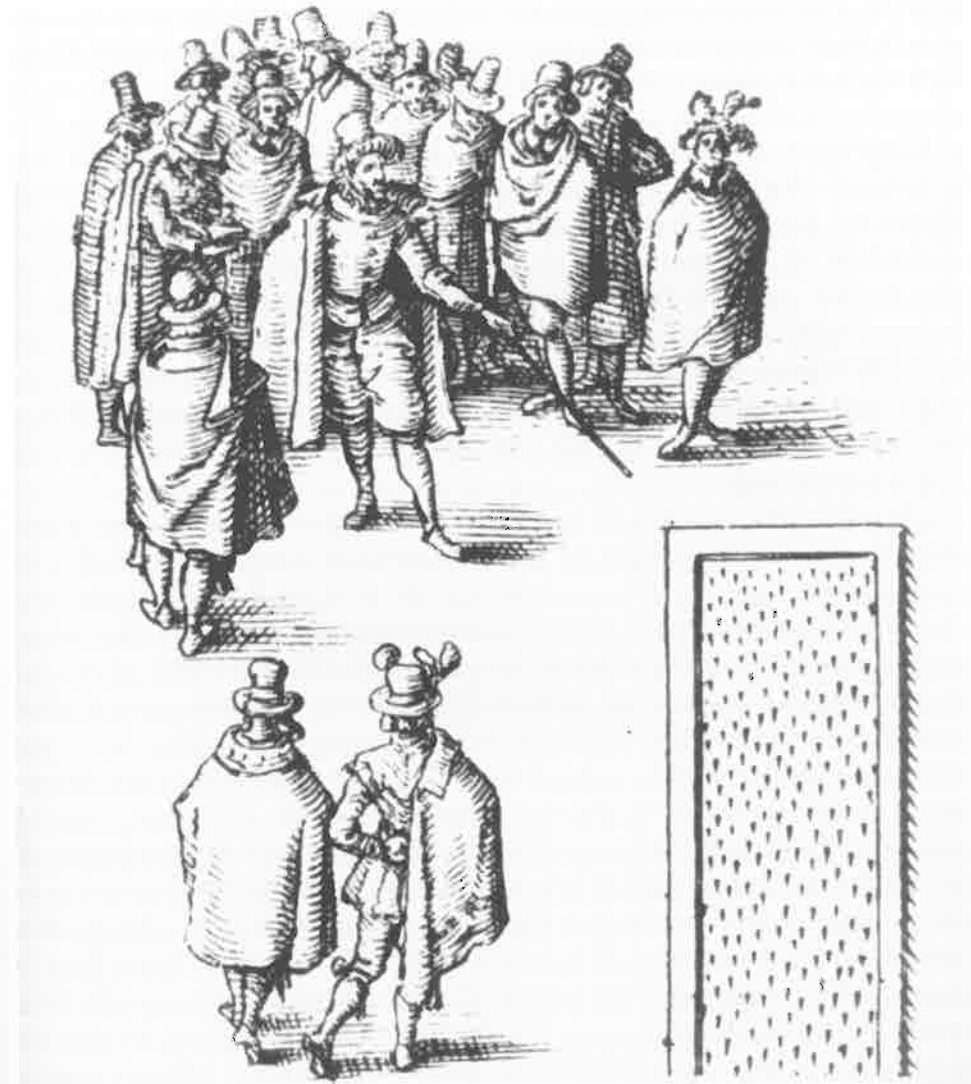


Fig. 7: Detail of Fig. 6.

Today in my microcosm, you can see more than 18,000 different things, among which 7000 in fifteen volumes, dried and pasted, 3000 of which I had painted from the life ("*al vivo*"). The rest – animals terrestrial, aerial and aquatic, and other subterranean things such as earths, petrified sap, stones, marbles, rocks, and metals – amount to as many pieces again. I have had paintings made of a further 5000 natural objects – such as plants, various sorts of animals, and stones – some of which have been made into woodcuts. These can be seen in fourteen cupboards, which I call the Pinacotheca. I also have sixty-

six armoires, divided into 4500 pigeonholes, where there are 7000 things from beneath the earth, together with various fruits, gums, and other very beautiful things from the Indies, *marked with their names, so that they can be found* [emphasis added].⁴

Contemporary observers were stupefied by the contents of Aldrovandi's collection – his “microcosm”, as he calls it here. One visitor wrote of his heart being aflutter and his breath baited in anticipation of seeing all that Aldrovandi had amassed. In the final years of his life, Aldrovandi arranged to have ownership of what he even called the “eighth wonder of the world” transferred to the city of Bologna, whose Senators accepted it gladly. His efforts are exemplary of what Paula Findlen has called Renaissance curiosity (as opposed to Baroque wonder), of the efforts to contain the infinite manifestations of nature in a single space – the space of what was also called a ‘museum’. Wonder, however, did not always inspire classification.

One organizing principle for Aldrovandi's efforts, as for his possessions, is the praxis of medicine; at Bologna, he taught the makings of medicinal remedies. In his museum as in others of the time, some of the most noteworthy contents were those that had or were thought to have medicinal application – from bezoar stones to dragon skeletons to myriad plants and spices. But if his own notes are any indication, entering the space of Aldrovandi's microcosm was to experience what seems from the present perspective of the life sciences relative chaos. Likewise, the headings under which he collated his working notes were distinctly rudimentary from the point of view, say, of systematic taxonomy. They were arranged alphabetically, topically, and geographically. The staggering number of images of the contents of the collection he had made and that he stored in the collection itself is important too – not because these images contributed to the classification of the contents, but because the net effect of their presence would have been to mirror, and to multiply, the vast number of items at hand. It comes as something of a relief when Aldrovandi writes that the 4500 pigeonholes in the 66 armoires in which he had placed the 7000 dried specimens were “marked with their names, so that they can be found.”

In offering a clear sense of the ostensible chaos typical of such collections, Aldrovandi's ‘museum’ is exemplary. Other examples abound. Of local relevance is the substantial collection amassed in the first quarter of the seventeenth century by the Leiden pharmacist Christiaan Porret (1554-1627), for example. Following Porret's death, a public auction was held in his home in Leiden to sell his un-

⁴ Quoted in: Lucia Tongiorgi, *Immagine e natura: L'immagine naturalistica nei codici e libri a stampa delle Biblioteche Estense e Universitaria*, Modena 1984, S. 131.

usual possessions. The title page of the auction catalogue describes the contents as “Exceptional Items or Curiosities and Rare Sensualities or Naturalia/Conch shells from the Indies and other foreign locales/Shells/Terrestrial and maritime creatures/Minerals/as well as strange animals; and some artfully made handicrafts and paintings/Which Christiaan Porrett [sic], Pharmacist of late, assembled in his ‘Cunstcamer’.” The contents of this remarkable (and frequently overlooked) collection ranged widely in kind and substance. Much like Aldrovandi's collection, Porret's too depends on and defies the order of medical study (Porret was a renowned pharmacist). The initial entries include, for example, “two serpentine containers, used as cups or mugs”; “two crystal glasses with white striping”; “a platter of serpentine stone”; “an ivory sphere or globe, with various balls that turn inside each other, on a pedestal or foot of ebony”; “a spiral staircase made of ivory”; “a cast frog, painted with lead” – which is to say glazed; a shell from the Straits of Magellan; a round piece of quartz; and “two mother-of-pearl fishing rods from the Straits of Magellan.” Reading the catalogue is a staggering experience. Porret owned animals cast from life and painted or glazed – Palissy ware, as it would come to be known – corals and shells, including at least one “mother of pearl shell, carved and painted,” a “covered nut from the Indies,” and a “covered head, from a fruit from the Indies,” either of which may have been a worked coconut. He also owned a number of rather conventional pictures – a pair of painted landscapes in the round, and images of contemporary rulers. Other items include a “Bird's nest in a red drawer, with five or six little birds very beautifully constructed of feathers in all colors”; “a small box that screws shut, artfully carved, containing wooden toothpicks”; numerous groups of “old medals or coins”; foreign pieces of cloth and clothing; and – perhaps the earliest recorded of their kind – four fruits or vegetables, a peach, a quince, a pear, and a cucumber, sculpted in wax. The catalogue also lists numerous natural stones and painted stones; Indian and Chinese inks; gems and fossils and herbs, both dried and painted; a magnifying glass, a kaleidoscope, and other optical devices; Hungarian and Turkish shoes; whistles to attract animals; a blowfish, a large crocodile, and a small crocodile, and sheets and sheets of watercolors of plants and flowers.

The catalogue of Porret's collection is a remarkable document. The title page alone presents an odd, slightly unsettling, and ultimately wondrous conflation of the exceptional, curious, or foreign – “conch shells from the Indies and other foreign locales” – with “artfully made handicrafts and paintings,” i.e., ‘artificialia’, in the context of a collection that is explicitly stated to have belonged to a pharmacist and that was kept in his “Cunstcamer”. The phrases on the title page, like the entries in the catalogue, alternate or vacillate between categories that could seem be-

wilderingly incongruous were it not for the patterns of 'Wunderkammer' collecting. Within the European context of the collections assembled in the sixteenth and seventeenth centuries at courts from Prague to Vienna to Brussels, and in ducal residences in between, as on a smaller scale privately, the combination in Porret's collection of natural items, works of art and handicraft, ethnographic specimens, and optical devices is entirely congruent with more general developments. Early modern European microcosmic collections consisted of famously heterogeneous compilations of goods. The polymath Francis Bacon recommended, in 1594, that the learned gentleman maintain "a goodly, huge cabinet, wherein whatsoever the hand of man by exquisite art or engine has made rare in stuff, form or motion; whatsoever singularity, chance, and the shuffle of things hath produced [...] shall be sorted and included."⁵ Many a learned gentleman did. Taste ran to instruments, ethnographical items and imports from the New World, and antiquities as well as to narwhal horns and bezoar stones. Bacon's inclusive prescription helps to explain the coexistence in such collections of dwarfs and hirsutes, for example, with artifacts of nature such as malformed antlers or 'painted' stones.

Early modern natural historians and philosophers enacted in their collections a commitment to obtaining scads of 'naturalia' that confirmed their active familiarity with and control over elements of the natural world. The relationship between the medical profession and 'Wunder'- or 'Kunstkammern' in the early modern period was built of a common interest in the natural world – in natural philosophy and natural history. Lorraine Daston and Katharine Park have asserted that "the emergence of collecting as an activity not just of patricians and princes, as in the High and later Middle Ages, but of scholars and medical men as well" was "closely connected with [the] new surge of interest in natural wonders."⁶ Princely collections were bound by symbolic order; their spectacle ultimately reflected the power of their owners. Daston and Park also adduced social identity as a primary defining factor were they cited a "spectrum ranging from the princely collection [...] to the professional collection" with scholars, physicians, and lawyers actively collecting under the professional rubric, and medical professionals most assiduously collecting 'naturalia'. The spectacle of learning, though, that such collections produced was distinct from the spectacle of power staged in princely

⁵ Francis Bacon, *Gesta Grayorum*, in: James Spedding, R.L. Ellis, and D.D. Heath (eds.), *The Works of Francis Bacon, Baron of Verulam, Viscount of St. Alban, and Lord Chancellor of England*, 14 vols., New York 1968; 1st ed. 1857-1874, vol. 8, pp. 334-335.

⁶ Lorraine Daston and Katharine Park, *Wonders and the Order of Nature, 1150-1750*, New York 1998, p. 149; see also Paula Findlen, *Possessing Nature. Museums, Collecting and Scientific Culture in Early Modern Italy*, Berkeley et al. 1994.

collections.⁷ Time does not permit me to explore the collections of Porret's contemporaries and compatriots Bernardus Paludanus and Dirck Cluyt, for example, here – but their vast assemblages of goods are important sources for comparative analysis.

The period during which Porret and others amassed their collections was a time of flux in the medical professions. The knowledge of simples among medical professionals was seen, across Europe, to have descended to an all-time low by the early decades of the sixteenth century. In the introduction to his groundbreaking herbal, the *Herbarum Vivae Eicones* (1530-1536), Otto Brunfels (1464-1534) told a pointed story about the decline of practical knowledge among medical professionals intended to highlight a weakness his publications might ameliorate. Citing Erasmus, Brunfels recounted an instructive prank a certain Basel doctor (Guilielmus Copus, d. 1532?) pulled on the medical faculty at the University of Paris. At a dinner with Paris professors Copus extracted an herb from the salad and challenged them to name it. Dumbfounded by its appearance, the learned professors concluded that it must be a rare and foreign vegetable. A kitchen maid was called to the table, and declared the herb to be common parsley.⁸ Professors of medicine and professional naturalists levied accusations of ignorance in matters horticultural and pharmaceutical against unlearned doctors, pharmacists, and other practitioners of the healing arts more often than the tale of Copus might suggest.⁹ Accusations of misreading dispensatory manuals or texts on the 'materia medica' were launched at pharmacists with some regularity. Mocked in contemporary texts, pharmacists were also in many cases subjected to increasingly stringent controls, often enforced by faculties of medicine who were authorized to license apothecaries and herbalists.¹⁰

⁷ Lorraine Daston and Katherine Park, *Wonders and the Order of Nature*, p. 266.

⁸ Erasmus, preface to *Sancti Hieronymi Opera*, Basel 1516; *Opus epistolarum Des. Erasmi Roterodami*, ed. by P. Allen, Oxford, 1910, II, p. 56. Otto Brunfels cites the story in *Herbarum Vivae Eicones*, Strassbourg, 1530, p. 13.

⁹ See, e.g., Paula Findlen, *Possessing Nature*, on Calzolari's theriac, pp. 272.

¹⁰ See Karen Meier Reeds, *Renaissance Humanism and Botany*, in: *Annals of Science* 33 (1976), p. 519-542; idem, *Botany in Medieval and Renaissance Universities*, pp. 24 and pp. 74-75 (Montpellier); cf. H.A. Bosman-Jelgersma, *Dodoens en de farmacie*, in: *Handelingen van de Koninklijke Kring van Oudheidkunde Letteren en Kunst van Mechelen* 89 (1986), pp. 137-139, and Vivian Nutton, *Idle old trots, cobblers and costardmongers. Pieter van Foreest on quackery*, in: H.A. Bosman-Jelgersma, *Inleiding tot het handschrift tegen kwakzalverij en onbevoegde geneeskunde, and the text of the manuscript against quacks, Van der Empiriken, lantloeperen ende valscher Medicyns bedorch*, in: *Pieter van Foreest, De Hollandse Hippocrates*, ed. by H.A. Bosman-Jelgersma et al., Knijpenberg: Pieter van Foreest Stichting, 1996, pp. 245-258, pp. 259-264, and pp. 265-292.

In the context of these disputes about legitimacy and medical knowledge, class divisions between university-trained medical professionals and 'unlearned' apothecaries were stressed to the point of outright ridicule. Social or class domination was at stake in numerous early modern disputes over the legitimacy of remedies and their contents. As late as 1622, Caspar Bauhin wrote:

The knowledge, collection, choice, culling, preservation, preparation, correction, and task of mixing of simples all pertain to the pharmacists; yet it is especially necessary for the physician to be expert and skilled in these things. If, in fact, he wishes to maintain and safeguard his dignity and authority among the servants of the art, he should teach *them* these things.¹¹

In his Flemish *Herbal (Cruijdeboeck)*, published in 1554 in Antwerp, Rembert Dodoens (1517-1585) explained that he had compiled a catalogue of the plant world in order to rectify widespread ignorance among practicing doctors of medicinal plants. Doctors, he wrote, "believed that such knowledge and familiarity was not worthy of their attention, but was the province of Apothecaries or other unlearned person [...]. This knowledge of and familiarity with plants is very necessary and fitting to all doctors."¹² In this context, medical professionals' collections might have offered leverage in a market where academic doctors dominated the field, and pharmacy had yet to be cleansed of the taint of 'unprofessional' science or medicine.¹³

¹¹ From Jean Fernel's *Methodo medendi*, as quoted in Caspar Bauhin, *Catalogus Plantarum circa Basileam sponte nascentium* [...], Basel 1622, preface to medical students. As cited in Karen Meier Reeds, *Botany in Medieval and Renaissance Universities*, New York et al. 1991, pp. 25-26.

¹² "[...] sij meynden dat alsulcken scientie oft kennisse haer niet en betaemde, maar alleen toebehoorde den Apothekers of sommighen anderen onghelerden [...] die scientie ende kennisse van den cruyden alle medijns seer nootelijck ende betaemelick es." R. Dodonaeus, *Cruijdeboeck*, Antwerp, 1554, p. ccclxxxvii. As cited in H. A. Bosman-Jelgersma, *Dodoens en de farmacie*, p. 132. On the production of dispensatoria in Antwerp in the sixteenth century; see *Botany in the Low Countries. End of the 15th century-ca. 1650*, ed. by F. de Nave et al., exh. cat., Antwerp: Museum Plantin-Moretus, 1993. Dodoens's sentiments echo those of Gaspare Gabrieli, the first professor of simples at the University of Ferrara. In a lecture given in 1543, Gabrieli wrote: "In my opinion [the lack of interest among physicians in *materia medica*] derives solely from the belief that the part of medicine dealing with knowledge of plants does not concern them. They leave the entire study of this branch [of medicine] to chemists, apothecaries, and wise-women. Thus at present the entire medicine of herbs is in the hands of the unlearned, the foolish, and superstitious wise-women. Not surprisingly, infinite errors occur from this incompetence." As cited in Paula Findlen, *Possessing Nature*, p. 251.

¹³ Florike Egmond, *Een mislukte benoeming. Paludans en de Leidse universiteit*, in: *Souffrir pour Parvenir. De wereld van Jan Huygen van Linschoten*, eds. R. van Gelder et al., Haarlem 1998, pp. 51-64; Claudia Swan, *Clutius Botanical Watercolors: plants and flowers of the Renaissance*,

How might such a chamber of wonder as Porret assembled have served him in pursuit of profit and social rank? Its very existence reflects his relative wealth, and it may during his lifetime have reflected social dominion as well. In an era in which efforts were made to clean up the profession – an era that saw the publication of guidelines in the form of *Pharmacopeia*, for example, and increasingly stringent judicial measures to divide gypsies, quacks, and herbalists from the socially and professionally responsible providers – possession of a collection may have served as a mark of distinction. His investment in the goods and in their preservation, in excerpting valuable items from circulation, may have elevated his status by implication.

Stuff/Wonder

Porret's collection affords us a remarkable opportunity to explore the nature of professional collecting – and collecting nature in particular – in early modern Holland. It defies general expectations about the practical nature of pharmaceutical pursuits in its inclusion of so very many exotic, unusual, and exceptional items, and it raises questions about the role of 'sensualia' or 'naturalia' ('sinnelickheden') in the practice of natural history. These expectations and these questions have been taken up by Daston and Park, in *Wonders and the Order of Nature* – in particular where they set out the terms of "preternatural history," as practiced by medical professionals.¹⁴ "Preternatural history" is a term they coin, to denote a new form of natural philosophy practiced in the early modern era that encompassed the study and indeed the privileging of "marvelous effects of all sorts" and wonders.¹⁵ Porret's catalogue bristles with natural particulars. We might say that it provides further evidence of Aristotelian investment in accumulating experience dovetailing, in the early modern era, with Baconian refutation of all but the facts of nature to effect a shift in the production of early modern knowledge. In this sense, it has a great deal in common with the gardens of its era – especially when we study them in the light of medical history.

Medical collection in Holland at the turn of the seventeenth century was more widespread than is generally acknowledged either in accounts of early modern collecting or in histories of science. While some collections were clearly used for pedagogical purposes – the Leiden garden comes immediately to mind – others were less clearly functional in that regard. The category of wonder, as recently

New York 1998.

¹⁴ Lorraine Daston and Katherine Park, *Wonders and the Order of Nature*, esp. pp. 146-172.

¹⁵ *Ibid.*, p. 137.

explicated by Daston and Park, goes some long way in helping to account for the impact these collections may have had and, indeed, for the ways in which they functioned philosophically. To know was, for these medical professionals, to know nature. And to know was to experience – to engage with the 'res naturae' in all their wondrous particularity. In the case of Porret as of the Leiden garden and others of the time and place as well, these were arenas that made available a range of specimens and objects, and in so doing constituted a crucial resource for a medical professional equally interested in use and wonder.

Die Ästhetik der Naturgeschichte.

Das Sammeln von Muscheln im Paris des 18. Jahrhunderts

Bettina DIETZ

Die so genannten *collections de diverses curiosités* oder *collections curieuses* im vorrevolutionären Paris des 18. Jahrhunderts vereinten ein für heutige Augen irritierend heterogenes Objektspektrum. Anhand einer ausgewählten Objektkategorie – exotischer Muscheln – wird im Folgenden auf die Kriterien einzugehen sein, denen die Zusammensetzung des curieusen Objektkanons folgte sowie auf die mit Hilfe von Sammlungsmobiliar realisierten Arrangements, die seiner Präsentation und Betrachtung dienten. Gleichzeitig ist zu fragen, inwiefern der Objektästhetik der *collections curieuses* eine naturhistorische Taxonomie entsprach, die anhand von Merkmalen der äußeren Gestalt klassifizierte. Das Ineinandergreifen der von Form und Farbe der Muschelschalen ausgehenden Attraktion, der dekorativen Muschelarrangements in den Sammlungen und der auf äußeren Merkmalen basierenden Taxonomien der Conchyliologie (Naturgeschichte der Schalentiere) profiliert eine spezifische Ästhetik der Naturgeschichte. Der schauwertorientierte Sammlungstyp der *collections curieuses* stand nicht – noch nicht – in Opposition zu einer vermeintlich klar konturierten Sphäre wissenschaftlichen Sammelns von Naturalien. Die Trennlinie zwischen Wissenschaft und Nicht-Wissenschaft, Profi und Amateur, systematischer Ordnung und dekorativer Anordnung war zu diesem Zeitpunkt noch nicht eindeutig gezogen. Objekte zirkulierten – davon unbeheligt – zwischen Personen und Institutionen und definierten damit ihren Geltungsbereich und dessen Grenzen.

Im ersten Stock seines Pariser Palais am heutigen Boulevard Saint-Germain hatte der Duc de Sully in einer Flucht von vier Räumen seine Sammlung arrangiert, die, so der Titel des 1762 erschienenen Auktionskatalogs, Folgendes enthielt: ägyptische, etruskische, indische und chinesische Kuriositäten, Skulpturen, Büsten und Reliefs aus Bronze, Alabaster und Marmor, sowohl antik als auch modern; gravierte und gefasste Steine; Münzen und Medaillen aus Gold, Silber und Bronze; Zeichnungen und Kupferstiche sowie Muscheln und andere Objekte aus