

The birth of the museum in the Nordic countries

Kunstkammer, museology and museography

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Abstract: *The article positions early modern collecting in relation to wider cultures of knowledge production by using perspectives from the history of knowledge, memory studies, and recent studies of Kunstkammern. Some twenty-five years after the reawakened interest in early modern collections the author revisits the question if the museum in the Nordic countries was born in the mid-seventeenth century and asks if collections became museums and a museum culture was established with the appearance of, one, museography, theories and methods of classification and display, two, museology, a science or profession of museum organisation and management, and, three, designated, purpose-built architecture and furniture.*

The first part brings into play exemplary scholarly and monarchical collectors that contributed to the development of museography and museology. The second part addresses seventeenth-century museography by introducing two acts of knowledge production and retention in the Kunstkammern – asking questions and selecting and ordering. Finally, the author discusses the findings in relation to arguments for placing the museum's birth in the decades around 1800.

Keywords: Ole Worm, Olaus Rudbeck the Elder, Johann Daniel Major, The Gottorf *Kunstkammer*, the Copenhagen *Kunstkammer*, Queen Christina's *Kunstkammer*, classification, method of questioning, commonplacing, topics.

The publication of the first volumes of *Nordic Museology* in 1993 and 1994 coincided with a reawakened interest in early modern collections (here summarily referred to as *Kunstkammern*). The Danish National Museum had just completed a decade-long project, led by Bente Gundestrup, on the Royal Danish *Kunstkammer* collections and catalogue (Gundestrup 1991).

Its 1993 exhibition *Museum Europa* (Nielsen *et al.* 1993) projected beginnings of Nordic museum history on developments in the seventeenth century. In Sweden, people like Arne Losman, Stig Fogelmarck, and Hans-Olof Boström (e.g. 1982) had applied new perspectives to collections among the royalty and nobility.

6

Out of thirty-five articles in the four issues of the first two volumes of *Nordic Museology*, eight addressed early modern collecting. In the first volume, Mogens Bencard offered a history of Danish royal collections against an European backdrop. Arthur MacGregor wrote about collections and antiquarianism, Gunnar Broberg elucidated the concept of wonder, and Krzysztof Pomian addressed history in paintings collections. In the second volume, Bencard argued for the *Kunstkammer* as a museum *avant la lettre*, Losman postulated Skokloster Castle as a memory theatre, Ella Hoch anchored the idea of the evolution in early modern erudition, and Peter Wagner dealt with the cabinet of *naturalia*.

The articles mirrored new approaches that tried to counter a long-established image of the *Kunstkammer* as unsystematic and unscientific which had dismissed it as a serious forerunner to the museum. Parallel to these developments, museum historians placed the birth of the museum in the decades around 1800 (e.g. Pomian 1994; Bennett 1995; Macdonald, Abt & Giebelhausen in Macdonald 2006), arguing that it was not till then that collections were opened to a wider public, became publicly owned, and ordered according to principles that we recognise today.

Twenty-five years later, I believe it is time to acknowledge and celebrate the work of the pioneers in the 1980s and 1990s by trying to get an even more elaborate understanding of the Nordic cultures of collecting in the early modern period. Positioning collecting in relation to wider cultures of knowledge production, using perspectives from the history of knowledge, memory studies and recent studies of *Kunstkammern*, I want to ask once more – like Bencard (1994:21, 24) and others did – if the museum in the Nordic countries was not born in the seventeenth

century. I will show visions, ambitions, and trials that could indicate that collections were in the process of becoming museums *avant la lettre* and a museum culture was in the making. The latter was the result of, so I hypothesise, the appearance of, *one*, museography,¹ theories and methods of classification and display, *two*, museology, a science or profession of museum organisation and management, and, *three*, designated, purpose-built architecture and furniture. In the first part I will bring into play a selection of exemplary collectors among university professors and the royalty that in my understanding contributed the most to the development of museography and museology. In the second part, I take a look at the period's museography by introducing two acts relating to knowledge production and retention that played out in the *Kunstkammern*. Finally, I discuss the findings in relation to the question of the birth of the museum in the Nordic countries.

Can we speak of the Nordic countries (*Norden*) in the seventeenth century? The terms were in use, but *nordisk* ('Nordic') and *Norden* did not connote to a shared brotherhood and the vision of a political union as they came to do in the nineteenth century. In early modern Sweden and Denmark-Norway, *nordisk* was used to refer to a linguistic, cultural, and geographical commonality, for instance by one of the protagonists of this article, Olaus (Olof) Rudbeck the Elder (ODS 1933b; SAOB 1947a). *Norden*, similarly referred to the geographic region of the commonality (ODS 1933a; SAOB 1947b) and was used as the translation of the Latin *septentrio* (RSD 2018). Today's Nordic countries are cultural and administrative inheritors of three states that operated and interacted in our region: the Kingdom of Denmark-Norway which at that time also included territory that today belongs to

Iceland, Sweden, and Germany; the Kingdom of Sweden which included Finland, Estonia, Latvia, and territories in present-day Russia, Poland, and Germany; the semi-autonomous Duchy of Schleswig-Holstein-Gottorp which today is split between Germany and Denmark. The militarily weak duchy was under Swedish protection as a vassal state due to threats from Denmark-Norway and several intermarriages between the two royal houses. The museological and museographic developments took place mainly at the ducal court in Gottorf and the royal courts in Copenhagen and Stockholm and at universities, notably those in Kiel, Copenhagen, and Uppsala. Despite continual wars, there was a well-established cultural and scientific exchange between the states, and travellers' accounts attest to the reciprocal interest in and access to each other's collections.

PROFESSOR-COLLECTORS

Let me first turn to the professors. Starting in the early 1620s, Ole Worm (1588–1654), professor at the Copenhagen University, was one of the first to systematically build up a collection for teaching and research in the Nordic region. Worm was a student of the famous botanist, Caspar Bauhin, and the influential encyclopaedist, Jakob Zwinger, and he had visited famous collections like those of Francesco Calzolari, Ferrante Imperato, and Bernhardus Paludanus (Schlee 1965:283; Schepelern 1971:144, 145, 212). He had also worked for Landgrave Moritz at the court in Kassel, which at the time housed several *Kunstammer* rooms and workshops, a library, and a laboratory.

In Sweden, similar, but less systematic attempts at building collections were made by Bishop Johannes Rudbeckius (1581–1646) at Västerås *gymnasium* and by Johannes

Franckenius (1590–1661), professor at Uppsala University. Influential professor-collectors of the succeeding generations include Thomas Bartholin (1616–1680) and Henrik Fuiren (1614–1659) in Copenhagen, Johannes Schefferus (1621–1679) and Olaus Rudbeck the Elder (1630–1702) in Uppsala, and Johann Daniel Major (1634–1693) in Kiel.

Principally, it is to them and a handful of other academics in the Nordic countries that we owe the development of museography. They wrote inventories, catalogues, and descriptions and struggled to improve methods for building up, ordering, arranging, and using collections. As a rule, they were professors of medicine with responsibilities for teaching botany and anatomy which was reflected in their teaching collections of herbaria, anatomical preparations, and stuffed animals. Typically of the period they were also polymaths and eagerly amassed objects of diverse kinds to use for research, teaching, and curiosity – antiquities, ethnographic objects, instruments, scale models etc. The increasing preoccupation with research based on observation and experiment combined with inadequate or lacking institutional repositories contributed to the growth of the professors' collections.

DISPOSITIONS

It was a new type of interior architecture that the professor-collectors imported from the continent to the Nordic countries. The predominant practice was to display all or the majority of one's collection, arranged according to a classification. The *Kunstammer* inventory thus took on a double role as an instrument for both practical management and scientific method, commonly structured as a movement through the rooms, along the walls and furniture, i.e. as a passage from

class to class (Gundestrup 1991:vol. i, XXIV; Ekman 2012:79; Marx et al. 2014:173; Ekman forthcoming). Let me shortly say something about how some of them organised their collections.

The posthumously published description of Worm's collection *Museum Wormianum* (1655) is divided into four books that equal four classes (fig. 1). The first book is divided into three sections: fossils, stones, and metals. The second book covers plants, the third animals, and the fourth *artificialia*, or man-made objects. The book is accompanied with a depiction of the chamber that the objects were displayed in. Camilla Mordhorst (2002:205) has shown how the classificatory order in the description largely is represented in the order of the display in the depiction. The actual chamber and the disseminated engraving both served to provide a quick reading of the underlying taxonomy.

A visitor to professor Rudbeck's chamber of rarities in Uppsala described some of the contents in his travel diary.² One of the rooms contained the class instruments. Musical instruments adorned the walls, while the others were divided into subclasses: mathematical instruments, surgical instruments, anatomical instruments, instruments for metal engraving, and tools for turning (Stalhoff 1896:298). The next room boasted tools divided in subclasses – axes, planes, lathes, and tools for firework. The classes were assigned particular rooms; the subclasses – each relating to a course he taught or another preoccupation – were allocated to particular walls, shelves or furniture. Despite its incompleteness, the diary betrays how Rudbeck's collection was organised, presented, and experienced as a sequential walk through classes and subclasses.

Johann Daniel Major in Kiel was a systematic collector and inventive *Kunstkammer* theorist

who admired Worm and Rudbeck (on Major and Worm, see Ekman forthcoming). He argued that the keeper of a *Kunstkammer* should be a learned man, not an artisan, and ought to have wide interests, be technically skilled, and speak several languages (Major c.1674:ch.VII §3). He organised his repository in three classes for logical and didactic reasons: *physis* or *naturalia*, ordered systematically, *techne* or the art, ordered alphabetically, and *antiquitas*, ordered geographically and chronologically (Steckner 1994:618; Drees 1996:47–48). The objects were arranged in two and a half metre tall, decorated cabinets, each with fifteen compartments (fig. 2). Painted titles such as *Bibliotheca* and *Numismatica* reflected their position in the system and the contents (Major 1688:14). The logic of the collection was paramount, and Major advised to paint large objects in a smaller scale in order that they might fit into their correct place in the system (Steckner 1994:618). He also advised to employ small cases in cardboard or metal labelled with Latin names or classes which served the orderliness, saved the trouble of translating to visitors, and refreshed the keeper's memory (Major c.1674:ch.VIII §7–11). With reference to a scientific method (Ekman forthcoming), Major advanced that the architectural arrangement should reflect the classification of the objects as correctly as possible so that the catalogue could be read, as it were, by looking at the exhibited objects.

THE THREE GRAND KUNSTKAMMERN

Various collections already existed at the Nordic courts in the sixteenth century (see e.g. Granberg 1929; Hein 2001:156–157). It is not until the mid-seventeenth century, however, that the sovereigns ordered the establishment of *Kunstkammern* as separate institutions, with

INDEX CAPITVM.	
LIB. I. SECTIO I.	
CAP. I. De fossilibus in genere.	pag. 1
II. De Terrarum differentiis.	2
III. De Terris quibus varii artifices utuntur, exceptis Medicis.	ibid.
IV. De Terris quae in usum Medicum veniunt.	5
V. De Terris Miraculosis.	17
VI. De Salibus in genere.	18
VII. De Sale Naturali & Artificiali.	19
VIII. De Nitro.	21
IX. De Alumine.	23
X. De Vitriolo & cognatis.	24
XI. De Sulphure.	26
XII. De Arsenico.	28
XIII. De Bitumine.	29
XIV. De Ambra & Spermate Ceti.	33
LIB. I. SECTIO II.	
CAP. I. De Lapidibus in genere.	36
II. De Saxo.	37
III. De Silice, Pyrite, Molaris, Cote.	39
IV. De Marmoribus.	41
V. De Saxo calcario, Gypso, Lapide Bononiensi, Pumice, Poro, Alcionio, Assio.	45
VI. De Stralchite, Stalagmite, Osseocolla, lapide Spongiosa, Unicornu fossili, &c.	50
VII. De Amiantino, Selenitide, Talco, &c.	55
VIII. De Lapide Tiburonum, Percarum, Carpiouum, Coracino, Limacum, oculis Caecis, Topho iuvenis.	58
IX. De Magnete, Hematite, Schisto, Smiride, lapide Lazuli, Armeno, Lapis, &c.	61
X. Glosopetra, Astroites, lapis Crucis, Inducens, Trochites, Belemnites, Marocchus, Cornu Ammonis.	67
XI. De Alefforio, Chelidonio, Fimbilico marino, lapide Vifino, Castoris, Humano.	71
XII. Cerantius, Bronchus, Ovum anguinum, Stites, Ostracites, Conchites, Bucardia, Fungites.	74
XIII. De Lapidibus minus pretiosis variarum figurarum, Naturalis & Artificialia referentibus.	81
XIV. De Gemmarum generatione & varietate.	92
XV. De Ispide, Heliotropio, Malachite, Prasio, Nephritico, Achate, Oniche.	93
XVI. De Calcedonio, Cornuolo, Phengite, Amethysto, Crystallo, Fluoribus, Lapide de Aventura.	98
XVII. De Adamante, Rubino, Granate, Hyacintho.	102
XVIII. De Saphiro, Smaragdo, Chrysolite, Topazio, Turcoide, Bufonio.	104
XIX. De Opalo, oculo Mundi, oculo Cassi, Margaritis, lapide Bezoartico.	107
LIB. I. SECTIO III.	
CAP. I. Quid Metallum?	113
II. De Auro.	114
III. De Argento.	115
IV. De Argenti fodinis Norvegia.	119
V. De Aere.	120
VI. De Ferro.	122
VII. De Plumbo.	124
VIII. De sui generis, seu improprie dictis Metallis, Plumbo cinereo, Antimonio & Argento vivo.	125
IX. De Metallis Affinibus.	127
X. De Galena, Cadmia nativa, Chrysolita, Spodo subterranea.	ibid.
XI. De Pyrite, Saxis Metallaribus, Antica, Talco.	129
XII. De Arte elaboratis, cum Metallis, Rubiginibus.	130
XIII. De Squammis Metallicis.	132
XIV. De Scoria, Lapide, Diphyrge, Vitro.	ibid.
XV. De Cadmia, Pompholige & Spodo factitia.	134
XVI. De Lithargyro & Molybdena.	135
LIBER II.	
CAP. I. Instituti rationem edocens.	137
II. De fungis, Agarico, fungo Sambucino, fungo Rosa canina, Boleto cervino, Pilla Stagnali.	ibid.
III. De Bysso arborco, Tela arborca, Musco terrestri, Coralloide, Pyxioide.	139
IV. De Arundinibus.	141
V. De Arachiduce, & Calamo Aromatico.	143
VI. De Doronico.	145
VII. De Ficu Indica, Hordeo fertilissimo, Hermaphroditico, Hypoasmino, Monstro Linaria carnalea.	148
VIII. Moly Virginianum, Rhaponticum, Rhus Virginiana, Rosa Hierichantica.	151
IX. Scorzonera Hispanica, Virga Aurca Virginiana, Ficus Canadensis.	152
X. De Radicibus Chine, Cyperi, Contrajerva, Deriagon, Jalap, Labrandino, Liquiritia Brasiliensi.	153
XI. Matalissa, Mechoaca, Ninsing, Rayz de nossa Senhora, Papeguanhe, Rubarbarum.	156
XII. Sarcaparilla, Tagion, Taussergins, Turpethum, Taca.	159
XIII. Folia Gariophyllorum Indicoorum, Lauri Virgiliano, Malabathri, Musc.	162
XIV. Fo-	

Fig. 1. The first page of the index of headings in Ole Worm's description of his own Kunstkammer in Museum Wormianum ... (Leiden, 1655). The index is a topical and hierarchical disposition of places - books, sections, and headings - which point to the objects' placement in the classification and in the Kunstkammer. Photo: Lund University Library urn:nbn:se:alvin:portal:record-104022.

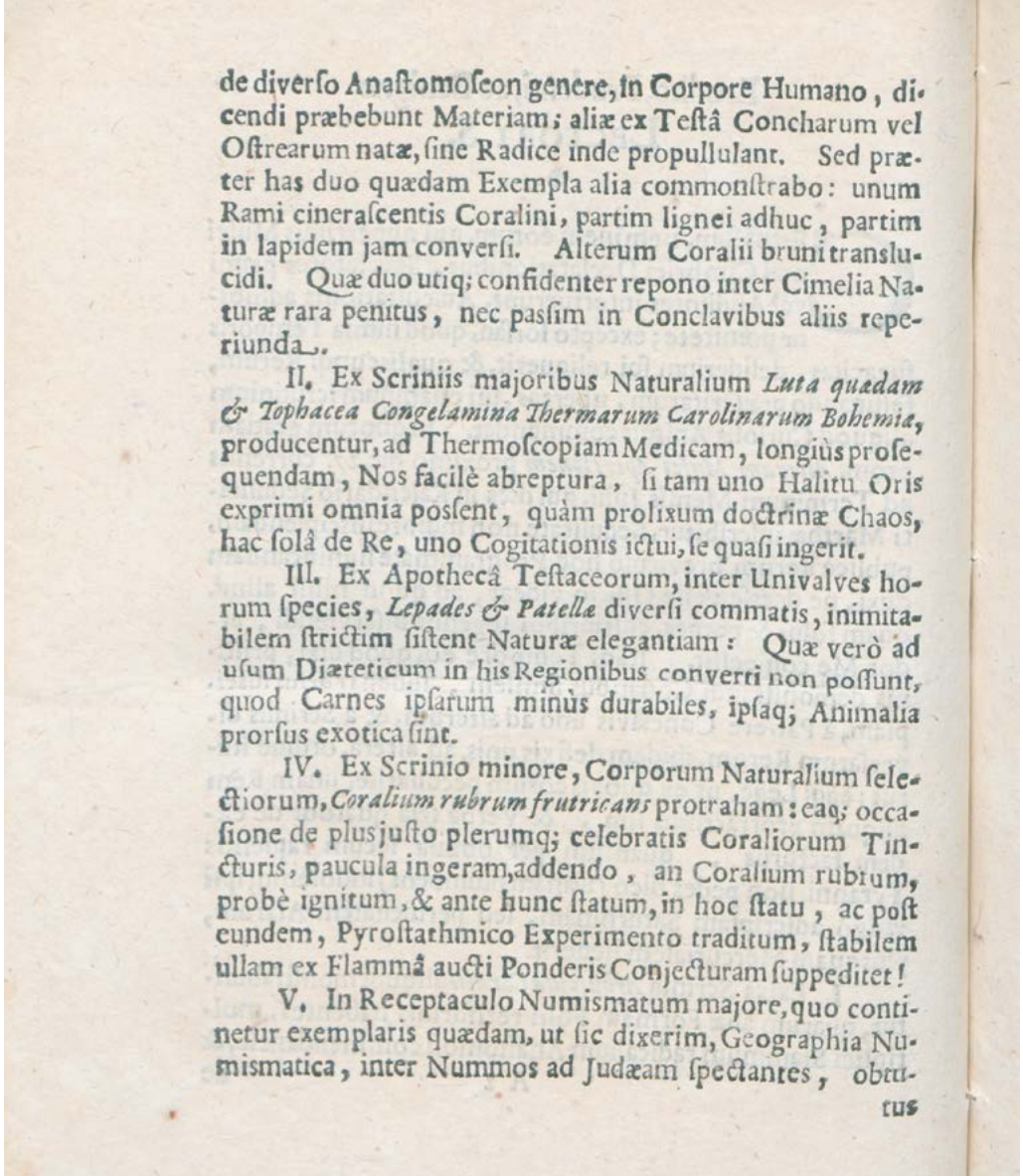


Fig. 2. Description of the numbered and titled cabinets and their contents in Johann Daniel Major's *Kunstammer in Musei Cimbrici* ... (Kiel, 1689). When the doors of all cabinets on the east side of the *Kunstammer* were opened at the same time, one and a half thousand objects were exposed to the visitor's gaze in classificatory order, as a "friendly parade". Photo Kiel University Library <http://nbn-resolving.de/urn/resolver.pl?urn=urn:nbn:de:gbv:8:2-2557817>.

designated premises and appointed keepers, to be used for representation and learned activities. It actually happened at the same time, i.e. around 1650, at the Gottorf Castle under Duke Frederick III, at the Copenhagen Castle under King Frederick III, and at Tre Kronor Castle in Stockholm under Queen Christina. There are several reasons for this. One is that the Westphalian peace treaty of 1648 stabilised the political and economic situations of Northern Europe. In addition, the Thirty Years' War had provided the Swedish royalty with a wealth of looted treasures, such as the remains of Rudolf II's *Kunstkammer* in Prague. The patrons were also related and well informed of each other's undertakings. Christina was Duke Frederick's second cousin. King Frederick was his first cousin. The latter was crowned in 1648, while Christina was crowned in 1650, when their collections were enriched by gifts.

GOTTORF

In the Gottorf Castle, the *Kunstkammer* was established by bringing together already existing collections with the *Kunstkammer* acquired from the famous Dutch physician Bernardus Paludanus in 1651 (Drees 1997). Duke Frederick was inspired by the grand *Kunstkammer* of his father-in-law, Elector of Saxony John George I, in Dresden (Schlee 1965:283). The *Kunstkammer* in Prague is assumed to have provided further influence (Skougaard 2002:89), and the Danish humanist and collector, Heinrich Rantzau (1526–1598), should have inspired to the establishment of *Gottorf* as a court of the muses (Heiberg 2002:24). The erudite Adam Olearius initiated the *Kunstkammer* institution and ordered its objects (Drees 1997:13). He built on Ole Worm's methods and made the *Gottorfische*

Kunstkammer famous by publishing a catalogue of parts of the collections, in fact reproducing many of the illustrations that Worm had used (Olearius 1674, cf. Drees 1997:12, 25 n.16).

During the reign of Frederick's father, three library rooms had been installed below the private apartments (Drees 1997:14). Frederick himself ordered the building of a staircase from the middle room to two rooms that from 1652 came to house the *Kunstkammer* (Drees 1997:15, Wiesinger 2015:137–138). The library kept substantial collections of coins and scientific instruments (Drees 1997:26–27). The first of the two *Kunstkammer* rooms boasted ethnographic objects from Russia, Persia, Japan, China, Greenland, and the Americas such as clothes dressed on mechanical mannequins (Olearius 1674:Tab III; fig. 3). The second *Kunstkammer* room contained *naturalia* such as stuffed animals, but also rarities and art pieces of various kinds.

As to its organisation, the three realms of nature were represented in the *Kunstkammer* – animals, plants, and minerals. The second room was ordered according to the four elements, one for each wall – water, fire, air, and earth (Drees 1997:27). As an example, different kinds of mirrors were among the things representing fire, while air was represented by a basilisk and salamanders – because they are living on air. The book collection was arranged according to the planets and the zodiacal signs (Drees 1997:19). The ordering principles served to present the library and *Kunstkammer* as one, as a model of the world which was the wondrous book from which God taught men, his children and pupils (Olearius 1674:Vorrede, cf. Drees 1997:21). These classifications were not original to Gottorf, but had been employed to provide logical and memorisable dispositions of many preceding European collections, significantly the planets in Giulio Camillo's

12 theatre of knowledge at Fontainebleau (Camillo 1970:205, cf. e.g. Mummenhoff 1993:186–187), the four elements in Vincenzo Borghini's *studiolo* for Francesco I of Medici in Palazzo Vecchio, ultimately from Pliny the Elder (Bolzoni 1984:31, 34–35, 2001:248), and the three realms of nature in Worm's chamber of rarities (Worm 1655, cf. Mordhorst 2002:209).

COPENHAGEN

King Frederick III had travelled to the Netherlands and France, and as the administrator of the Prince-Archbishopric of Bremen he had been close to Gottorf and to the ports where exotic rarities were landed in large quantities (Liisberg 1897:14–17). He nurtured an interest in science, visited several anatomical demonstrations and paid agents to acquire rarities abroad (Gamrath 1975:125, Bruun 2012:145–146). In 1652, he visited his first cousin's *Kunstammer* in Gottorf, but by then he had already assembled his collections at the Copenhagen Castle. By 1650, the *Kunstammer* in the Copenhagen Castle seems to have been institutionalised (Dam-Mikkelsen 1980:XIII), being installed in eight rooms near the royal library (Liisberg 1897:18). Each room contained objects of one of the classes: *naturalia*, *artificialia*, antiquities and arms, mathematical instruments, exotic and ethnographic artefacts, coins and medals as well as scale models. The inventory from 1673 (pub. Liisberg 1897:153–181) lists the objects room by room, wall by wall, cabinet by cabinet.

Over time, the collections grew, and the king ordered the erection of a separate building which was completed in 1673. I suggest that we recognise the Copenhagen library and *Kunstammer* building as the first larger and free-standing building in the Nordic

countries, designed for the purpose of housing classified collections – arguably the first Nordic museum building. The upper floor housed the *Kunstammer*, arranged according to the same classes as it had been at the castle, and a paintings gallery. The engravings in the catalogue (Jacobaeus 1696; fig. 4) provides good insight as to how the objects were arranged on furniture or on the walls, fastened with hooks or strings. As typical of its time and just like the 1673 inventory, the catalogue is organised room by room, wall by wall. The forewords to the catalogue portray the collection as interplay between nature, with associations to God and the beauty of raw materials, and art, connoting to man as artisan and refiner.³

STOCKHOLM

Queen Christina was an unusually well-educated and erudite monarch (see e.g. Åkerman 1991, Åslund 2005), and the institutionalisation of the *Kunstammer* was paramount in her attempt to build up a learned court for European intellectuals.⁴ After a fire in 1648, Christina, twenty-two years old, commissioned considerable reconstructions in the castle (Nordberg 1940:253). The queen's apartment was lavishly embellished and a number of paintings pillaged in Prague were hung on the walls. Immediately below her apartment, the royal library was arranged in six small, but lofty rooms (Nordberg 1940:267; Callmer 1977:34–35). The *Kunstammer* was installed on the top floor of an adjacent castle wing which was probably built for the purpose (Granberg 1929:92; Nordberg 1940:267, 268). Inside the outer walls, it measured approximately twenty-nine times five metres or about 145 square metres (Olsson 1940:plansch 62), and it was sub-divided into an antechamber to the north and two vaulted



Fig. 3. Table of objects relating to the peoples of Greenland and the Sami and Nordic region in the Gottorf Kunstkammer. Adam Olearius, *Gottorfische Kunstkammer ...* (Schleswig, 1666). The runic calendars have been copied from Worm's Museum Wormianum. Note the depicted hooks on which some objects hang and the shadows that indicate the standing mannequins. Photo: Lund University Library urn:nbn:se:alvin:portal:record-104673.

rooms. Most objects were probably displayed here, but the marble and copper statues were displayed in a separate gallery (Bjurström 1966:417). Its location is uncertain, but it may already have been located on the ground floor under the royal library, where it was in 1660 (Nordberg 1924:78).

An inventory (Crumbügel 1652; fig. 5) lists the objects according to these classes: large

and small busts and statues of copper, ditto of marble, medals of different kinds of metal, different kinds of art pieces of ivory, rarities of amber, rarities of coral, rarities of mussel shell, vases of porcelain, Indian objects, cabinets, clocks, globes, mirrors, rarities of crystal, miniature mountains, gems, mathematical instruments, horns, tables, sun hats, objects of wood, and diverse pieces, including e.g.



Fig. 4. The first page of section IV of the catalogue of the Royal Kunstkammer in Copenhagen, which contained optical and mechanical objects. The two illustrations of objects mounted on the walls or placed on flat surfaces underscore the correspondence between the physical rooms of the Kunstkammer, the typographical space in the catalogue and the classificatory places in the taxonomy. Oligero Jacobaeus, *Museum regium ... (Hafniae, 1696)*. Photo: Lund University Library urn:nbn:se:alvin:portal:record-103981.

a mummy, a tobacco pipe and a dragon.⁵ In addition, there were several classes for paintings.

There are indicia of the *Kunstammer* being arranged in the rooms according to the classes and sequence of the inventory. This is how most contemporary collections were inventoried, which was also the case for the royal armouries at Tre Kronor (Meyerson 1937–1939:35), managed by the royal tailor, Johan Holm Leijoncrona, who was also the keeper of the *Kunstammer*. Also, the royal librarian Gabriel Naudé's description of the collections (Bjurström 1966:417) repeats many of the categories of the inventory more or less in the same order.

The *Kunstammer* was classified – and arguably exhibited – primarily according to the material that the objects were made of and thus followed the arrangements in the Habsburg collections in Vienna (Kirchweger 2012:38), at Ambras Castle (Scheicher 1979:81, Sandbichler 2015:175–176) and likely in Prague (Bukovinská 1997:207). Sorting by material is visually very evocative, with each class sharing a range of colours, and at Ambras Castle the cabinets had been painted in contrasting hues to enhance the effect. The likely origin of the principle is found in the division of objects in Pliny the Elder's *Naturalis historia* (books 33–37), a standard reference for early modern scholars.

The *Kunstammer* was the *pièce de résistance* of a court that in addition to the library and sculpture gallery housed two armouries, a treasury, and a silver chamber. As was also the case in Copenhagen, the monarch had a zoo, arranged as a theatre in the old moat, where lions, a deer, an aurochs, and a bear were baited in front of an audience (Nordberg 1940:257). Gardens for animals and plants – wrote Major (c.1674:ch.VIII §13) – were

the natural extensions to the *Kunstammer*, because they could hold objects that were too large or alive and required conditions which the *Kunstammer* could not meet.

The *Kunstammer* was not long-lived. In 1654, Christina abdicated, left Sweden, and converted to Catholicism. She took with her substantial parts of the collections. Despite this, the three grand Nordic *Kunstammern* attest to ambitions regarding the establishment of a museum culture. At them all, we see the introduction of professional keepers who managed, classified, and arranged the objects. They catered for scholarly use and presented the collections to visitors. Purpose-built buildings and rooms were introduced at Gottorf and Copenhagen and published catalogues also contributed heavily to the reputation and dissemination.

ASKING QUESTIONS

Early modern museography was not an autonomous field. Pomian (1990:275) has reminded us of the importance of studying collections as multi-disciplinary expressions at the intersections of various domains and embedded in a culture. Along the same lines I want to underscore how museographic considerations were a constituent of a wider erudite culture. With a famous treatise as the point of departure, and in order to indicate the interrelationship between museography and other knowledge practices, I shall introduce two acts that conditioned the arrangement of the collections – *asking questions* and *selecting and ordering*.

In the early eighteenth century, the German merchant Caspar Friedrich Neickelius set out to define the *Kunstammer* culture with his comprehensive *Museographia* (1727). He made his own enquiries and made use of virtually

16 all well-known *Kunstkammer* catalogues and theoretical writings from the late sixteenth century to his time, some sixty of them. In a passage, which in my opinion well reflects late seventeenth-century *Kunstkammer* culture, Neickelius (1727:454–458) supplies the reader with twenty-five rules of conduct when visiting collections.

Several of them pertain to questioning. Arriving at the *Kunstkammer*, the visitor should enquire about the origins of the collection, how it is arranged, which objects can be regarded as a system of rarities, and if there are any particular rarities. The visitor should not feel ashamed to ask for what is unknown with an object, its name, and if it is *artificialia*, man-made, or *naturalia*, of God's creation. If man-made, one should ask who made it, what it can be used for, and what one should admire. If natural, one should enquire about its apothecary or medical use, where it was found and by whom. Accounting for the finder or giver was linked to good scholarly manners, and Ole Worm, for instance, credited the donors of objects in letters and in his published description (Schepelern 1971:ch. IV).

Asking questions stood at the centre of knowledge pursuits during the period. On the basis of four questions, which one can ask about things, provided by Aristotle in *Posterior Analytics*, the Lutheran reformer Philip Melanchthon developed a dialectic method, which proceeds by means of ten questions (Ong 2004:238): What does the word mean? Does the thing exist? What is it? What are its parts? What are its various species? What are its causes? Its effects? Its associations? What things are related to it? What is contrary to it? Melanchthon had a decisive influence on Protestant education after the reformation, in Sweden as well as in

Denmark-Norway. Around 1580, the high-ranking Swedish nobleman Per Brahe the Elder (1520–1590) endorsed Melanchthon's method of questioning for enquiring about the constitution of foreign cities and states in his advice on the young nobleman's education (Brahe 1971:27).⁶

Questioning was an integrative part of *ars apodemica*, a method of travelling, on which designated handbooks were published starting in the 1570s (Stagl 1995:57). Based on such handbooks, in 1629 two Swedish noblemen advised the Count Palatinate, later King Karl X Gustav of Sweden, what to enquire about on his educational travels abroad (fig. 6). "In order to better perceive and grasp," Jean (Johan) Rosenhane (1611–1661; 1913:257. My transl.) wrote, "one shall with purpose search throughout the country and the city that one comes to and inspect and get fully informed of its entire constitution and – after careful questioning – note down its particularities." One of the things one should enquire about is "*Theatra and exicothamiae ... or Kunstkammern* – where there are rarities" (Rosenhane 1913:260. My transl.).

The exploration of collections of rarities had by then become a constituent of an increasingly methodical culture of travelling, in which questioning was central. For instance, when Olaus Rudbeck the Elder's son, Olaus Rudbeck the Younger (1660–1740), went abroad to study botany in 1687, the father asked him as a favour to collect seeds and roots and specified seven questions which the son should ask about plants that did not grow in the Uppsala botanical garden (Annerstedt [1905]:320–321): Which plants are annual and which perennial? Which could ripen their seeds in Holland? Which require wet or dry earth? Etc. We need to appreciate that the answers to the questions commended by Rosenhane,

33

Karakterer aff Crystall

af Sijg ^r Wittman Göteborg	1.	En Nössa Vårdur af Crystal de montagne. insettade med gull.
Petter d. 4 ^{de} Linnæus	2.	En liten flaska af dito med en thinn på.
P. O. Salvio	3.	En liten kånill med grov på af dito, ligger afsi en brödelada.
Hän Frög	4.	En höst Crystallglas som är en vattenkanna. För i ett rött papper.
af fr Greff Jacob delagardi	5.	En tunn af glas med grov på på sidan ett fincast papper.
949. L. 4 ^{de} Linnæus	6.	En flaska af Crystal de montagne med en förgylt fast ord lock af silfver, och en kånill, sån afsi ett rött förgylt papper, försett med Nyafußspina.
Hän Frög	7.	En lång Vårdur thinn af Crystal de montagne.
	8.	En förgylt glas af dito med ett brunt thinn.
	9.	Än ett mindre förgylt glas af dito med ett insettat.
	10.	En Ronbytt af glas afsi ett finast papper.
	11.	

Fig. 5. The inventory of the Kunstkammer at the castle Tre Kronor in 1652, primarily ordered according to material. This page lists rarities of crystal. The left margin is used for noting provenance or the whereabouts of objects that are not in the Kunstkammer. Photo: Mattias Ekman. Source, The Royal Library, Stockholm (manuscript collection, MS S4a).

Rudbeck or Neickelius were the hard currency in an erudite culture that asked questions about everything. The answers were used for the classification and arrangement according to method, as advocated for instance by Major (c.1674:ch.VI §5, ch.VIII §7, 9, 11), and were entered into catalogues, written on labels, or communicated verbally to visitors.

SELECTING AND ORDERING

Some of the Melancthonian questions derived from the so-called topical tradition in the rhetoric (Gilbert 1960:127). It prescribed processes for finding arguments according to Aristotelian logic by considering ‘definition, property, genus, and accident under categories such as quantity, quality, relation’ (Moss 1996:4, cf. 10). The questioning in the *Kunstkammer* was in fact a constituent of the practice of logical ordering. In 1624, the keeper of the electoral *Kunstkammer* in Dresden asked for permission to reorganise it and establish an “honest order” according to the Aristotelian logic (Marx *et al.* 2014:112–113). Many objects were removed, and the remainder was re-arranged logically according to their origin, relation to other objects, size, and quality so that visitors could better grasp the system of rarities and internalise the rooms and furniture as a mnemonic scheme (Melzer 2010:262–263, Marx *et al.* 2014:112–114). The architectural position of each object was supposed to betray its logical place in the classification, combining memorisation of particular objects with systemic learning. It was this arrangement that became the model for the Gottorf *Kunstkammer* (Schlee 1965:283; cf. Marx *et al.* 2014:114–116).

Topical thinking meant to conceive processes of ordering knowledge in spatial terms. Each class, heading, or entity equalled a place in

an abstract architecture, which could take the form of a diagram or list of headings. The places were also called commonplaces – in Greek *topoi koinoi*, in Latin *loci communes*, in Danish *almene steder* and in Swedish *allmänna platser*. *Commonplacing*, the technique of selecting, classifying, and arranging arguments, examples, or sententious phrases topically – i.e. in places and under headings – was recommended by tremendously influential thinkers like Erasmus of Rotterdam and Rudolf Agricola. By the seventeenth century it had become a preferred studying and research technique (Lechner 1974, Blair 1992, Moss 1996). The places were not simply metaphorical places – even if metaphors such as forests, gardens or store-houses flourished. “Place” referred to a logical position within a relational scheme which served as the topography for thinking. This is most clearly seen in the dichotomous tree diagrams popularised by Petrus Ramus, in which the dialectical places correspond to a hierarchy of headings or categories. If a theme had been logically arranged according to the “order found within things themselves” (Ong 2004:195) – Ramus argued – the mind would more easily remember the places, and with them the things themselves. Ramus’ topical method was immensely well received. One of his friends, Theodor Zwinger, used it to underpin his method of travelling, but he also used Ramist diagrams to enable the reader to grasp the system of the 1,500 page encyclopaedia *Theatrum vitae humanae*, published in 1565. Jakob Zwinger, Ole Worm’s teacher in Basle, was Theodor Zwinger’s son and Ramus’ godson, and he continued to revise his father’s encyclopaedia.

I want to bring forward the idea that commonplacing, or the topical method, lies at the very heart of the early modern culture of collecting, from the beginning of the

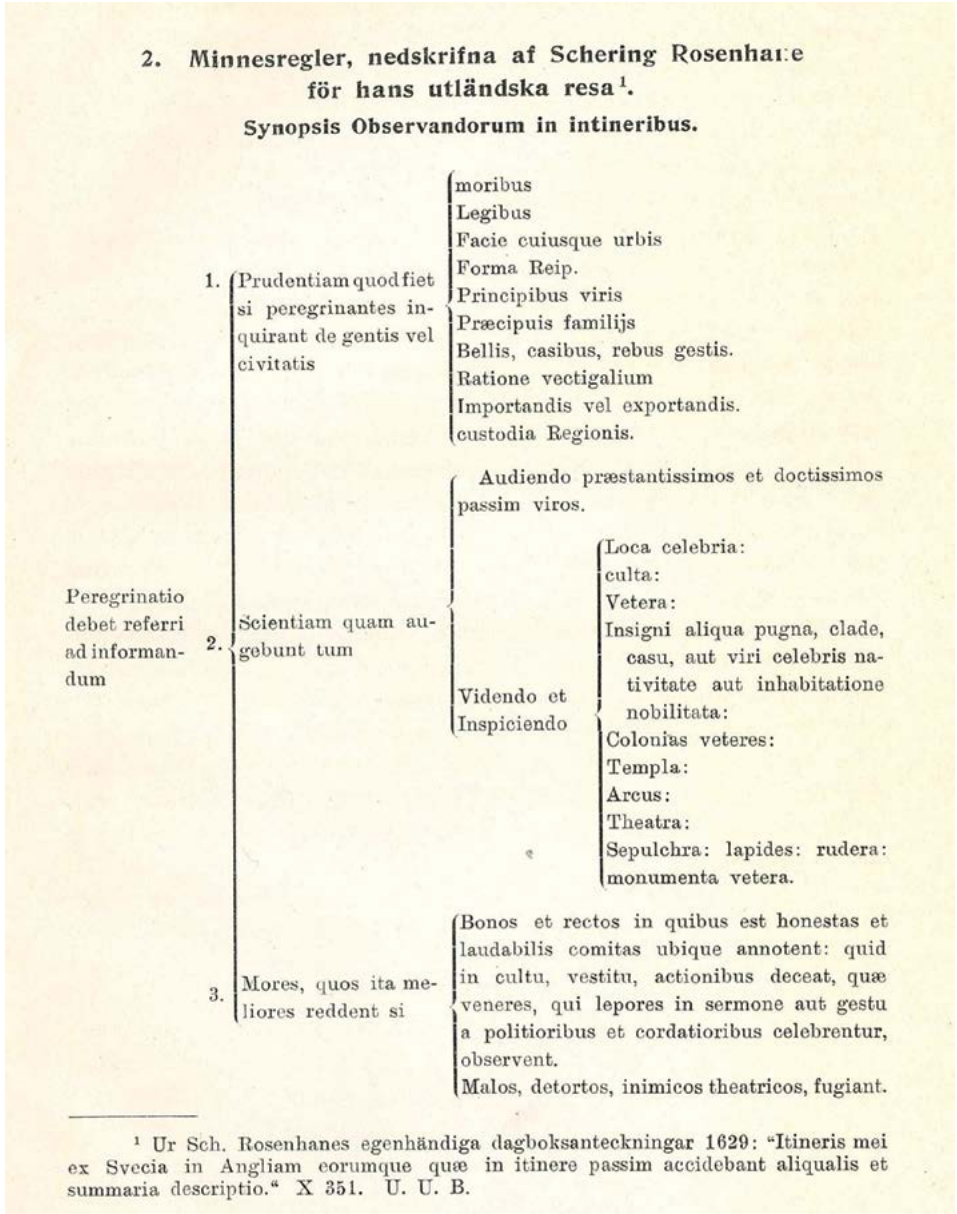


Fig. 6. Topically ordered diagram for what to observe when travelling abroad in Schering Rosenhane's diary of 1629. The diagram has much in common with diagrams published to aid travelling, for instance by Theodor Zwinger. Photo: Mattias Ekman. Source Rosengren (1913:261). The diagram has been redrawn from the original in Uppsala University Library (manuscript collection, MS X. 351).

second half of the sixteenth century to at least the mid-eighteenth century. The Bavarian *Kunstammer* in Munich is one of the first where the objects were ordered by means of places and titles – with reference to Zwinger (Kuwakino 2013, Pilaski Kaliardos 2013). The topical order served as a classificatory device and as an architectural principle for arranging physical objects. Walking through the four wings of the building, one would move through the classes and the subclasses – referred to as “inscriptions”, and from table to table to observe, touch, and enquire about the material specimens and artefacts.

With Worm, the commonplacing method was introduced to Nordic collecting. Worm, who must have been well acquainted with the topical tradition through his studies in Basle, structured *Museum Wormianum* methodically and hierarchically on three levels, in books, sections, and under headings, as a topical model of places for the reader to grasp and memorise (Ekman forthcoming; fig. 1). Reading sequentially in the inventory or catalogue would simulate a physical promenade or a movement of the gaze in the *Kunstammer* (cf. Mordhorst 2002). Also the first published catalogue of the Royal *Kunstammer* in Copenhagen (Jacobaeus 1696), into which Worm’s collection was absorbed, was topically structured. The headings equal classes as well as rooms, the spatial character of which is underscored by the accompanying illustrations of categories of objects placed or hung in the very *Kunstammer* (fig. 4). The ideal *Kunstammer* propagated by Major (c.1674) borrowed heavily from Worm’s commonplace practice and integrated it into late seventeenth-century museography (Ekman forthcoming). For Major the epitome of a *Kunstammer* was one where the architectural arrangement of the objects directly corresponded to a

catalogue that was ordered scientifically in a topical structure of classes and subclasses. A study of Carl Linnaeus (1707–1778; Eddy 2010) has shown how, towards the end of the *Kunstammer* era, he ordered his systems topically in the same commonplacing tradition and by using diagrams like those of Petrus Ramus. Linnaeus’s tables fuse taxonomic logic with a relational and spatial disposition, to provide a mental topography. Linnaeus advised that the specimens that are collected for research should be organised in cabinets, under headings or in places, according to the order of the systematic table (on Linnaeus and collecting, see also Becker 1996:103–117; Segelken 2010:82–89). That the compartments were called *loculus*, little place (Eddy 2010: 250), betrays their origin as logical positions in the taxonomic space.

THE KUNSTKAMMER AS MUSEUM

Does the portray of Nordic *Kunstammern* that I have sketched provide arguments for placing the birth of the museum in the Nordic countries in the seventeenth century? Did the culture demonstrate visions, ambitions, and trials that make *Kunstammern* as an idea more similar to, than different from, the museums that appear from around 1800 in the Nordic countries? The last decades have witnessed an increase in the research done on early modern collections, and the availability of digitised archival and published source material have contributed to a more nuanced appreciation of the culture. With the appreciation comes the doubt of any clear-cut distinction between the *Kunstammer* and the “revolutionary museum” (Pomian 1990:263–264). While certainly, as Bennett (1995:27, 29) has pointed out, the target audiences of museums changed from including only the ruling strata, which counted

the royalty, nobility, the republic of letters, and the bourgeoisie, to eventually encompass a wider public and previously excluded groups, such as women. Nonetheless, the seventeenth-century *Kunstkammer* was an arena intended for what was then perceived as the public sphere. Ole Worm (1655) was the first to publish a *Kunstkammer* description that served his professor-colleagues and benefactors and the 1696 catalogue for the Royal *Kunstkammer* in Copenhagen was disseminated to other courts (Maar 1910:X). The ducal and royal *Kunstkammern* were constituents of larger attempts at establishing the Nordic courts as intellectual and cultural forums for scholars, noblemen, and ambassadors. Representatives of the same categories were often guests in Rudbeck's *Kunstkammer* in Uppsala, which counted as one of the city's main attractions, next to Rudbeck himself. Major opened his *Kunstkammer* in 1688 to the "studying youth or other art- and virtue-loving persons" who nurtured an interest in the things of the world (Kirschner 2002:73 My transl.).

The self-imposed duty to receive visitors is one of the three features that Pomian (1994:112) requires from a public museum. Public ownership through a corporation is another. While corporate ownership was rare in the Nordic countries – to the exceptions count a few university and academy collections – the history of the royal *Kunstkammern* shows an awareness of the critical distinction between personal or crown ownership, although the latter was never equalled with the people (cf. Bennett 1995:35). When Prince Elect Christian died in 1647, his widow had to return his treasures on the request of King Christian IV, who regarded them as crown property (Hein 1998:122). When Queen Christina abdicated and left Sweden, discontent was voiced with her treatment of the collections as private

property, taking parts of them out of the country (Granberg 1929:108).

Pomian also requires that the public collection is ordered according to criteria of inter-subjective validity, something that I have demonstrated was the case with the exemplary collectors, who employed widely used and easy intelligible classifications. Certainly, as Hooper-Greenhill (1992) was one of the first to analyse, the inter-subjective criteria varied with changing epistemes (Foucault). This did not mean that the preoccupation with curiosity and wonder – exceptional, singular, and exotic objects – was not challenged by, and co-existed with, the new science's desire to collect normal and commonplace objects, which were representatives of a particular place in a taxonomy (on this epistemic shift, see Pomian 1990:77–78; Hooper-Greenhill 1992:140; Bennett 1995:40–41). It was Worm who proved the unicorn horns to be narwhale tusks (Schepelern 1971:278–279) and highly systematically built up his teaching collection of *naturalia*. Rudbeck collected Swedish plants in his botanical garden and his *Kunstkammer* boasted mathematical and anatomical instruments used in teaching and research. Bennett (1995:42) recognises a new status of objects in public natural history displays of the late nineteenth century as "an illustration of certain general laws and tendencies", disregarding the singular material object's unique properties. I would argue that it is precisely the view of the object as illustration and representative for a position in a system that underpinned endeavours such as Rudbeck's systematic botanical work with the *Book of Flowers* and *Campus Elysii*, which was based on his collections of dried and living plants and botanical books (Martinsson et al. 2008:20–33). The same view is recognisable in Major's *Kunstkammer* vision, in which a classification

based on an order inherent in nature should correspond directly to the disposition of objects in the *Kunstkammer*. Its rationale, as I have tried to illustrate, was developed from prevailing knowledge techniques: the method of questioning, with its focus on the properties of objects, and topical ordering, with its relational and representative interplay between object and system. By increasing our sensibility towards the erudite culture that the *Kunstkammer* was a constituent of, and recognising it as a novel and unprecedented knowledge technology invented in the sixteenth and seventeenth centuries, we may be able to appreciate how much the *Kunstkammer* shared with subsequent forms of museums. Its transmutation into a more modern shape was arguably a longer and more gradual process which in the Nordic countries started in the seventeenth century.

NOTES

1. In this article, in order to be precise, I use the definitions of “museography” and “museology” as of Merriam-Webster’s dictionary. Neickelius (1727) uses the term “museography” in a similar manner.
2. There does not exist any comprehensive study of Rudbeck’s chamber of rarities. An article is currently being prepared by the author.
3. I am grateful to Bente Gundestrup at the National Museum in Denmark who provided me with an unpublished work translation into Danish of the forewords.
4. Christina’s *Kunstkammer* has not recently been subjected to any comprehensive study. This account is based on the preliminary findings of my on-going research. Olof Granberg has principally focused on the paintings collection (1929:esp. 92–93). In addition there are a few minor studies (e.g. Steneberg 1955:80–81, Bjurström 1966:417–419). Inga Elmqvist Söderlund at Stockholm University was studying the *Kunstkammer* and the treasury when she sadly passed away in 2017. Her preliminary findings, edited by Märten Snickare, are planned to be published in an anthology edited by Merit Laine.
5. My transl. from Swedish after Granberg’s (1929:182–227) transcriptions.
6. That Brahe’s method of questioning is Melanchthon’s and not Aristotle’s (Brahe 1971:235) is clear by comparing with Ong (2004:362 n. 36).

UNPUBLISHED SOURCES

Crumbügel, Polycarpus 1652. “Inventarium Oppå Alle Dhe Rariteter Som Finnas Uthi H: K: M:ttz VÅR ALLERNÅDIGSTE DROTNINGIS KONSTKAMMAR ... Anno 1652”, The Royal Library, Stockholm, Manuscript collection, MS S4a.

PUBLISHED SOURCES

- Annerstedt, Claes (ed.) [1905]. *Bref af Olof Rudbeck d. ä. rörande Upsala Universitet*. 4 vols., iv: 1686–1702. Upsala.
- Brahe, Per 1971/MS c.1580. *Oeconomia eller Hushållsbok för ungt adelsfolk*. Lund: Nordiska Museet.
- Rosenhane, Jean 1913. “1. Instruction hwareffter man på en reessa nytteligen kan observera dee saacker, som nödigst äre at ackta.” In Hilding Rosengren. *Karl X Gustaf före tronbestigningen. Pfalzgreffen intill tronföljarvalet 1649. Akademisk afhandling*. Uppsala, 257–260.
- Stalhoff, Gerhard 1896. “Uppsala och dess omgifningar 1660.” *Upplands fornminnesförenings tidskrift*, 288–305.

EARLY MODERN PUBLICATIONS

Camillo, Giulio 1970. “L’idea del teatro [The Idea of the Theatre].” In Lu Beery Wenneker *An*

- Examination of L'idea del Teatro of Giulio Camillo, Including an Annotated Translation, With Special Attention to his Influence on Emblem Literature and Iconography.* PhD thesis University of Pittsburgh, 187–399.
- Jacobaeus, Oligero 1696. *Museum regium, seu, Catalogus rerum tam naturalium, quam artificialium ...* Hafniae: Joachim Schmetgen. (Digital facs.: urn:nbn:se:alvin:portal:record-103981)
- Major, Johann Daniel c.1674. *Unvorgeffliches Bedencken von Kunst= und Naturalien=Kammern ins gemein.* Kiel: Joachim Reuman. (Digital facs.: <http://diglib.hab.de/drucke/ub-4f-6/start.htm>)
- Major, Johann Daniel 1688. *Kurzer Vorbericht betreffende Johann-Daniel Majors ... Museum Cimbricum, oder insgemein so-genannte Kunst-Kammer ...* Plön: Tobias Schmidt. (Digital facs.: <http://www.mdz-nbn-resolving.de/urn/resolver.pl?urn=urn:nbn:de:bvb:12-bsb10660648-2>)
- Neickelius, Caspar Frid. 1727. *Museographia Oder Anleitung Zum rechten Begriff und nützlicher Anlegung der Museorum Oder Raritäten-Kammern ...* Leipzig: Hubert. (Digital facs.: <http://www.mdz-nbn-resolving.de/urn/resolver.pl?urn=urn:nbn:de:bvb:12-bsb10051211-0>)
- Olearius, Adam 1674 (2nd edn)/1666. *Gottorfische Kunst-kammer ...* Schleswig: Gottfried Schultzens Buchladen. (Digital facs.: <https://archive.org/details/gottorfischekun00olea>)
- Worm, Olao 1655. *Museum Wormianum, seu, Historia rerum rariorum...* Lugduni Batavorum: A Iohannem Elsevirium. (Digital facs.: urn:nbn:se:alvin:portal:record-104022)
- Åslund, Leif 2005. *Att fostra en kung: Om drottning Kristinas utbildning.* Stockholm: Atlantis.
- Becker, Christoph 1996. "Vom Raritäten-Kabinett zur Sammlung als Institution: Sammeln und Ordnen im Zeitalter der Aufklärung." PhD thesis. Ludwig-Maximilian-Universität.
- Bencard, Mogens 1994. "Kunstkammers and museums." *Nordisk museologi*, 2:1, 21–24.
- Bennett, Tony 1995. *The Birth of the Museum. History, Theory, Politics.* London: Routledge.
- Bjurström, Per 1966. *Christina, drottning av Sverige. En europeisk kulturpersonlighet.* Stockholm: Nationalmuseum.
- Blair, Ann 1992. "Humanist methods in natural philosophy: The commonplace book." *Journal of the History of Ideas*, 53:4, 541–551.
- Bolzoni, Lina 1984. *Il teatro della memoria. Studi su Giulio Camillo.* Padova: Liviana.
- Bolzoni, Lina 2001. *The Gallery of Memory: Literary and Iconographic Models in the Age of the Printing Press.* Toronto: UTP.
- Boström, Hans-Olof, Stig Fogelmarck & Arne Losman 1982. *En värld i miniatyr: Kring en samling från Gustav II Adolfs tidevarv.* Stockholm: Kungl. husgerådskammaren.
- Bruun, Niels W. 2012. "Kongens stol i Domus Anatomica Hafniensis." *Fund og forskning i det Kongelige Biblioteks Samlinger*, 51, 131–147.
- Bukovinská, Beket 1997. "The Kunstkammer of Rudolf II: Where it Was and What it Looked like." In Eliška Fučíková (ed.), *Rudolf II and Prague. The Court and the City.* London, 199–201.
- Callmer, Christian 1977. *Königin Christina, ihre Bibliothekare und ihre Handschriften. Beitrag zur europäischen Bibliotheksgeschichte.* Stockholm: KB (The Royal Library).
- Dam-Mikkelsen, Bente 1980. "Kunstkammeret: The Kunstkammer." In Bente Dam-Mikkelsen & Torben Lundbaek (eds.) *Etnografiske genstande i Det kongelige danske Kunstkammer 1650–1800. Ethnographic Objects in the Royal*

LITERATURE

- Åkerman, Susanna 1991. *Queen Christina of Sweden and Her Circle: The Transformation of a Seventeenth-Century Philosophical Libertine.* Leiden: E. J. Brill.

- 24 Danish *Kunstkammer 1650–1800*. København: Nationalmuseet, IX–XXIV.
- Drees, Jan 1996. "Das Kieler 'Museum Cimbricum' (1688) des Johann Daniel Major (1634–1694) und seine Beziehungen zum Gottorfer Hof." In Hainz Spielmann (ed.), *Jahrbuch des Schleswig-Holsteinischen Landesmuseums*. Neue Folge, Band V, 1994–1995. Neumünster: Wachholtz, 38–53.
- Drees, Jan 1997. "Die 'Gottorfische Kunstkammer'. Anmerkungen zu ihrer Geschichte nach historischen Textzeugnissen." In Heinz Spielmann & Jan Drees (eds.) *Gottorf im Glanz des Barock. Kunst und Kultur am Schleswiger Hof 1544–1713*. ii: Die Gottorfer Kunstkammer. Schleswig: Schleswig-Holsteinisches Landesmuseum, 11–48.
- Eddy, M. D. 2010. "Tools for reordering: Commonplacing and the space of words in Linnaeus's *Philosophia Botanica*." *Intellectual History Review*, 20:2, 227–252.
- Ekman, Mattias 2012. "Edifices of memory: Topical ordering in cabinets and museums." In Johan Hegardt (ed.), *The Museum Beyond the Nation*. Stockholm: The National Historical Museum, 61–86.
- Ekman, Mattias (forthcoming), "Architecture of method: Theories of disposition in the *Kunstkammer*." In Karin Vicente (ed.), *Proceedings from the European Architectural History Network. Fifth International Meeting 13–16 June 2018 Tallinn*: EAHN.
- Gamrath, Helge 1975. "Københavns slot." In Kristian Hvidt, et al. (eds.) *Christiansborg slot*. i: Absalons borg. Københavns slot. Det første Christiansborg København: Nyt Nordisk Forlag, 48–166.
- Gilbert, Neal W. 1960. *Renaissance Concepts of Method*. New York: Columbia University Press.
- Granberg, Olof 1929. *Svenska konstsamlingarnas historia. Från Gustav Vasas tid til våra dagar*. 3 vols., i: Gustav Vasa–Kristina. Stockholm.
- Gundestrup, Bente 1991. *Det kongelige danske Kunstkammer 1737. The Royal Danish Kunstkammer 1737*. 2 vols + index. København: Nationalmuseet.
- Heiberg, Steffen 2002. "Fra småfyrster til selvherskere – de Gottorpske hertuger og Danmark." In Mette Skougaard (ed.), *Gottorp. Et fyrstehof i 1600-tallet*. København: Gyldendalske boghandel, 10–51.
- Hein, Jørgen 1998. "Collecting in Prague and Copenhagen." In *Rudolf II, Prague and the World. Papers from the International Conference, Prague, 2–4 September, 1997*. Prague: Artefactum, 120–127.
- Hein, Jørgen 2001. "Repræsentation eller belæring?" *Nordisk museologi*, 1–2, 153–170.
- Hooper-Greenhill, Eilean 1992. *Museums and the Shaping of Knowledge*. London: Routledge.
- Kirchweger, Franz 2012. "Die Schätze des Hauses Habsburg und die Kunstkammer. Ihre Geschichte und ihre Bestände." In Sabine Haag & Franz Kirchweger (eds.) *Die Kunstkammer. Die Schätze der Habsburger*. Wien: Christian Brandstätter, 12–49.
- Kirschner, Stefan 2002. "Vom privaten Naturalienkabinett zur öffentlichen Schausammlung: Johann Daniel Majors 'Museum Cimbricum' (1689)." In Gudrun Wolfschmidt (ed.) *Popularisierung der Naturwissenschaften*. Berlin: GNT-Verlag, 64–77, 353–396.
- Kuwakino, Koji 2013. "The Great Theatre of Creative Thought. The *Inscriptiones vel tituli theatri amplissimi ... (1565)* by Samuel von Quiccheberg." *Journal of the History of Collections*, 25:3, 303–324.
- Lechner, Sister Joan Marie 1974 (repr. edn.)/1962. *Renaissance Concepts of the Commonplaces. An Historical Investigation of the General and Universal Ideas Used in All Argumentation and Persuasion With Special Emphasis on the Educational and Literary Tradition of the Sixteenth and Seventeenth Centuries*. Westport, Connecticut: Greenwood Press.
- Liisberg, H. C. Bering 1897. *Kunstkammeret. Dets stiftelse og ældste historie*. København: Det nordiske forlag.

- Maar, Vilhelm (ed.), 1910. *Holger Jacobaeus' Rejsebog (1671–1692)*. København: Gyldendalske.
- Macdonald, Sharon (ed.), 2006. *A Companion to Museum Studies*. Malden: Blackwell.
- Martinsson, Karin & Svengunnar Ryman 2008. *Blomboken. Bilder ur Olof Rudbecks stora botaniska verk*. Stockholm: Prisma.
- Marx, Barbara & Peter Plassmeyer (eds.) 2014. *Sehen und staunen. Die Dresdner Kunstammer von 1640*. Berlin: Deutscher Kunstverlag.
- Melzer, Christian 2010. *Von der Kunstammer zum Kupferstich-Kabinett. Zur frühgeschichte des Graphiksammelns in Dresden (1560–1738)*. Hildesheim: Georg Olm.
- Meyerson, Åke 1937–1939. "Ett besök i livrustkammaren år 1662." *Livrustkammaren*, 1:1–12, 29–36.
- Mordhorst, Camilla 2002. "Systematikken i Museum Wormianum." *Fortid og nutid*, 3, 204–218.
- Moss, Ann 1996. *Printed Commonplace-Books and the Structuring of Renaissance Thought*. Oxford: Clarendon Press.
- Mummenhoff, Julia 1993. "Das Gedächtnistheater des Giulio Camillo." In Silvia Baumgart, et al. (eds.) *Denkräume zwischen Kunst und Wissenschaft*. 5. *Kunsthistorikerinnentagung in Hamburg 1991*. Berlin: Dietrich Reimer, 177–197.
- Nielsen, Arno Victor, Annesofie Becker & Willie Flindt (eds.) 1993. *Museum Europa. En udstilling om det europæiske museum fra renæssansen til vor tid*. København: Nationalmuseet.
- Nordberg, Tord O:son 1924. *Stockholms gamla slott under 1600-talets senare hälft. Särtryck ur RIG*. Föreningen för svensk kulturhistoria.
- Nordberg, Tord O:son 1940. "Slottets historia under sextonhundratalet." In Martin Olsson (ed.) *Stockholms slotts historia*. i: *Det gamla slottet*. Stockholm: P. A. Norstedt & Söner, 209–345.
- ODS = Ordbog over det danske sprog 1933a. "Norden." Det Danske Sprog- og Litteraturselskab. <http://ordnet.dk/ods>, accessed 26 March 2018.
- ODS = Ordbog over det danske sprog 1933b. "Nordisk." Det Danske Sprog- og Litteraturselskab <http://ordnet.dk/ods>, accessed 26 March 2018.
- Olsson, Martin (ed.) 1940. *Stockholms slotts historia*. 3 vols., i: *Det gamla slottet*. Stockholm: Norstedts.
- Ong, Walter J. 2004/1958. *Ramus. Method, and the Decay of Dialogue. From the Art of Discourse to the Art of Reason*. Chicago: The University of Chicago Press.
- Pilaski Kaliardos, Katharina 2013. *The Munich Kunstammer. Art, Nature, and the Representation of Knowledge in Courtly Contexts*. Tübingen: Mohr Siebeck.
- Pomian, Krzysztof 1990. *Collectors and Curiosities. Paris and Venice, 1500–1800*. Trans. Elizabeth Wiles-Portier. Cambridge: Polity Press.
- Pomian, Krzysztof 1994. "Das Museum: die Quintessenz Europas." In Annesofie Becker & Arno Victor Nielsen (eds.) *Wunderkammer des Abendlandes. Museum und Sammlung im Spiegel der Zeit*. Bonn: Kunst- und Ausstellungshalle der Bundesrepublik Deutschland, 112–118.
- RSD = Renæssancens sprog i Danmark ordbogsbase 2018. "Norden." Det Danske Sprog- og Litteraturselskab. <http://renaessancesprog.dk>, accessed 26 March 2018.
- Sandbichler, Veronika 2015. "»souil schönen, kostlichen und verwunderlichen zeügs, das ainer vil monat zu schaffen hette, alles recht zu besichtigen vnd contemplieren.« Die Kunst- und Wunderkammer Erzherzog Ferdinand II. auf Schloss Ambras." In Sabine Haag et al. (eds.) *Das Haus Habsburg und die Welt der fürstlichen Kunstammern im 16. und 17. Jahrhundert*. Wien: Holzhausen, 167–193.
- SAOB = Ordbok över svenska språket 1947a. "Nordisk." Lund: Svenska Akademien. www.saob.se, accessed 26. Mar. 2018.
- SAOB = Ordbok över svenska språket 1947b. "Norden." Lund: Svenska Akademien www.saob.se, accessed 26. Mar. 2018.
- Scheicher, Elisabeth 1979. *Die Kunst- und Wunderkammern der Habsburger*. Wien: Molden Edition.

- 26 Schepelern, H. D. 1971. "Museum Wormianum. Dets forudsætninger og tilblivelse." PhD thesis. Københavns universitet.
- Schlee, Ernst 1965. "Die Kunstkammer." In Ernst Schlee (ed.) *Gottorfer Kultur im Jahrhundert der Universitätsgründung. Kulturgeschichtliche Denkmäler und Zeugnisse des 17. Jahrhunderts aus der Sphäre der Herzöge von Schleswig-Holstein-Gottorf*. Flensburg: Schloss Gottorf, 280–299.
- Segelken, Barbara 2010. *Bilder des Staates. Kammer, Kasten und Tafel als Visualisierungen staatlicher Zusammenhänge*. Berlin: Akademie.
- Skougaard, Mette 2002. "Fra Gottorf til Frederiksborg: Historien om en himmelglobus." In Mette Skougaard (ed.), *Gottorp. Et fyrstehof i 1600-tallet*. København: Gyldendalske boghandel, 86–113.
- Stagl, Justin 1995. *A History of Curiosity. The Theory of Travel 1550–1800*. Chur: Harwood Academic Publishers.
- Steckner, Cornelius 1994. "Das Museum Cimbricum von 1688 und die cartesianische 'Perfection des Gemüthes'. Zur Museumswissenschaft des Kieler Universitätsprofessors Johann Daniel Major (1634–1693)." In Andreas Grote (ed.) *Macrocosmos in Microcosmo. Die Welt in der Stube. Zur Geschichte des Sammelns 1450–1800*. Wiesbaden: Springer, 603–628.
- Steneberg, Karl Erik 1955. *Kristinatidens måleri*. Malmö: Allhem.
- Wiesinger, Anja Silke 2015. *Schloss Gottorf in Schleswig. Der Südflügel. Studien zur barocken Neugestaltung einer norddeutschen Residenz um 1700*. Kiel: Ludwig.
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