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## VISUALIZING VISIONS: RE-VIEWING THE SEVENTEENTH-CENTURY GENRE OF CONSTCAMER PAINTINGS

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# Foreword and acknowledgements

This dissertation is the result of four years of full-time research, supported by the Luxembourg National Research Fund (10929115), and includes four appendices. Since the (modern) titles of *constcamer* paintings are not always unique, and might change over time, catalogue numbers have been introduced that function as unique identifiers. The catalogue numbers introduced in the text [e.g. Cat. No. 1] refer to Appendix A. The figures referenced throughout this thesis [e.g. Fig. 1] can be found in Appendix B. The dataset that describes the *constcamer* catalogue is included as Appendix C. Pictorial overviews of details of *constcamer* paintings are shown in Appendix D. Primary sources are usually cited in English translations, except for late sixteenth- and seventeenth-century sources originating in the Low Countries.

I am grateful to all who have helped me over the years and many of them are acknowledged throughout this dissertation. I would especially like to thank my supervisors and defence committee members for their enthusiasm, dedication, and support.

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# 1 Introduction

“THE PAST IS A FOREIGN COUNTRY. THEY DO THINGS DIFFERENTLY THERE.”

– *The Go-Between* (1971)<sup>1</sup>

This study re-views the *constcamer* genre, a type of painting which emerged in the early seventeenth century. *Constcamer* paintings or pictures of collections were created almost exclusively in Antwerp, global capital of trade, and to a lesser extent in Brussels, political capital of the Spanish Habsburg Netherlands, until about 1700. The depicted collections include paintings, sculpture, graphics, musical and scientific instruments, animals, plants, and materials. Objects are shown in interiors with contemporary architectural elements, furnishings, and decorations, and often in the presence of people, such as historical and allegorical figures. The scenes are as much the result of fiction as reality, and their pictorial richness continues to intrigue.

Even though *constcamer* paintings have received considerable scholarly interest, they have not yet been extensively studied as a genre. To date, no attempt has been made to collect all known examples, and consequently no complete overview exists. It has been suggested that approximately one hundred *constcamer* paintings have survived, but this estimate is not based on an actual count.<sup>2</sup> In addition, *constcamer* paintings have usually been studied within the bounds of certain academic disciplines. For example, most research has been conducted by art historians who were biased toward the represented paintings or

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<sup>1</sup> *The Go-Between*, 0:02:05 (opening line).

<sup>2</sup> This number was introduced in Schwartz, “Lady Pictura Painting Flowers,” 66.

pictures-within-pictures, at the expense of the wide variety of surrounding objects, subjects, themes, and elements on view.

The aim of this study is to determine what a *constcamer* painting is, in terms of form, content, and meaning. A catalogue of all preserved examples of *constcamer* paintings and their rich and complex contents will form the basis for interpretation. Points of interest that will be extensively studied are the reception of the ancients, the history of collecting, and scientific instruments. This study will argue that *constcamer* paintings can be understood as places for “seeing.” The sense of sight includes both a physical and mental component, which is inextricably linked to the historical contexts in which pictures of collections were invented. The origins of the genre, as well as its practical and theoretical underpinnings, will be traced. Thematic case studies will then be used to explore how *constcamer* paintings can be studied further.

Since the last major studies of the genre, advances in the field of computer science have made it possible to systematically collect, archive, and analyze images of artworks and associated information on a large scale. Modern digital tools and methodologies will be used to build a dataset that represents *constcamer* paintings in detail, based on existing scholarship and personal observations. The resulting *constcamer* dataset currently holds 161 *constcamer* paintings, approximately 3,400 depicted and related objects and entities, and over 12,800 connections between them. This study will make clear that a digital approach to *constcamer* paintings leads to improved visual perception and understanding, and thereby contributes significantly to making sense of the seventeenth-century genre.

## Background

This research was initiated within the context of the “Digital History and Hermeneutics” Doctoral Training Unit (DTU), a Programme for Research-Intensive Doctoral Education (PRIDE) funded by the Luxembourg National Research Fund (FNR). The DTU served as “an experimental space in which different communities of practice and epistemic cultures – including historians, philosophers, computer scientists, geographers and information and data scientists as well as experts in human-computer interaction – negotiate new forms of knowledge production in the field of digital history and humanities.”<sup>3</sup> This setting provided a favorable environment to address pressing issues within my personal area of expertise: the history of art and visual culture.

## Context

Digital tools and methodologies have been tested for their usefulness and developed specifically for this project to study the seventeenth-century genre of *constcamer* paintings. In addition, traditional comparative historical and interdisciplinary art historical research methods have been used to interpret the historical significance of the pictorial content. A key focus is to establish the prevailing theories and practices of collecting in the early modern period. Furthermore, an outline of the local artistic and intellectual climate is essential to contextualize the emergence of the genre. To better understand the knowledge and meanings visually embedded in *constcamer* paintings the genre is studied in its entirety. Three case studies provide deeper insights into a selection of representations, their

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<sup>3</sup> <https://www.c2dh.uni.lu/doctoral-school> (accessed February 15, 2021).

interrelationships within the genre, and their intersections with ancient and contemporary literature, mythology, and philosophy.

Any attempt to catalogue the *constcamer* genre relies heavily on images. *Constcamer* paintings are preserved in public and private collections throughout Europe and to a lesser extent in the United States of America. Their widespread distribution is further complicated by restrictions on accessibility. While public institutions such as museums generally allow access to their collections, both in exhibition and in storage, this is not necessarily the case for private collections. So although auction houses, for example, document their sales, the identity of the buyer and the current location are usually not disclosed. Since a large proportion of *constcamer* painting are privately owned, the use of images is unavoidable.

The pictorial content of the images forms the starting point for this research. The main premise is that there is a wealth of information embedded in *constcamer* paintings waiting to be extracted. However, this is not self-evident and tools are needed to label, and thus keep track of, what can be seen. My undergraduate studies had already revealed that a single object could appear in more than one *constcamer* painting, as well as that digital tools could be of unprecedented use in labeling or annotating images.<sup>4</sup> A primary concern is to convert images into information or data that can be stored in a database. Such a dataset will then inform analysis and dictate the subsequent research necessary for interpretation.

## Purposes

The main objective of this research is to map and explain the contents of *constcamer* paintings through looking, seeing, and understanding. This requires insights into the contexts

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<sup>4</sup> Koeleman, "Studying the Studio"; Koeleman, "Post-Pompeian Roman Wall Painting."

in which they were created, and what forms of artistic expression are meant by *constcamer* paintings in the first place. The aim is therefore to compile a comprehensive catalogue, which currently includes 161 examples [Appendix A]. These images mainly provide a pictorial, rather than textual or material, access to the past. Moreover, as pictures of collections, they provide a context for interpreting the subjects and objects depicted in them. Annotating what is represented in *constcamer* paintings serves as a means of seeing more accurately, recognizing previously unnoticed elements and connections, and then viewing such annotations in a broader perspective.

Another objective is to examine Renaissance conceptions of the role of artists and their creations to uncover the prevailing image theories in the seventeenth-century Spanish Habsburg Netherlands, to which Antwerp and Brussels belonged. In doing so, it is necessary to consider previous centuries as well, since they had a great influence on seventeenth-century views. The reception of antiquity and the appropriation of classical concepts led to a renewed appreciation of the then closely related arts and sciences. Demonstrating a historical consciousness aims to clarify why and how the *constcamer* genre emerged and what was special about the conditions in Antwerp – at the time one of the richest centers of commerce and innovation plagued by wars and religious conflicts – that allowed this type of painting to flourish.

## Significance, scope, and definitions

The study of the *constcamer* genre provides an excellent opportunity to test and assess the usefulness of advances in the field of computer science in answering art historical questions. Since *constcamer* paintings depict collections, there is an affinity with museum and other

collections that are nowadays being digitized and made accessible online. A preliminary examination of some of these is at the basis of determining the requirements of this project's dataset. The scope of the catalogue of *constcamer* paintings is limited to the seventeenth century. Although pictures of collections were created by new generations of artists up to and including the nineteenth century, these are not considered representative of the phenomenon originating from Antwerp and Brussels.

The seventeenth-century Dutch term *constcamer* is used throughout this thesis to indicate the type of painting being studied. This nomenclature comes closest to contemporary designations. The term *constcamer* was initially used to refer to material collections, rather than pictures of them. According to the preface of Karel van Mander's influential *Het Schilder-Boeck* of 1604,

*maer die daer nieuwer [Schilder-const] begheerde, die en hoefde (soo't hem ghelegghen waer) maer te gaen tot Praga, by den teghenwoordigen meesten Schilder-const-beminder der Weerelt, te weten, den Roomschen Caesar Rhodolphus de tweedde, sien in zijn Keyserlijcke wooninghe, en oock elder, in alle **Const-camers** der machtighe Lief-hebbers, alle d'uytnemende costlijcke stucken, ondersoeckende, overstaende, en rekenende yeders weerde en prijs, om te sien wat mercklijcke somme hy vinden sal. Ick acht, dat hy verwonderende veroorsaecht sal wesen te bekennen, onse Schilder-const te zijn een edel uytnemende heerlijcke deughtsaem oeffeninghe, die voor geen ander Natuerlijcke, oft vry Consten te wijcken heeft.*<sup>5</sup>

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<sup>5</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4r-\*4v (my emphasis).

Those who love the art of painting could go to Prague and see the imperial residence of Holy Roman Emperor Rudolf II, “the greatest lover of painting at the time,” as well as the *constcamers* of “powerful enthusiasts” elsewhere. Van Mander believes that visitors to such “art-rooms” may be forced in wonder to admit that painting need not give way to other natural or liberal arts.

The first known appearance of the term *constcamer* in relation to a type of painting dates from 1627 and can be found in an Antwerp inventory. The inventory in question mentions “*een schilderije wesende een constcamerken*” or a painting being a *constcamerken*, the diminutive of *constcamer*.<sup>6</sup> This term was thus in use about twenty years after the genre emerged in Antwerp and remained in use in inventories throughout the century.<sup>7</sup> Consequently, using the term *constcamer* and speaking of a genre is somewhat anachronistic. The seventeenth-century genre of *constcamer* paintings can only be called a genre in hindsight, since it was not yet considered a genre at the moment of inception.<sup>8</sup> As a result, this research is imbued with both modern connotations and historical notions.

## Thesis outline

This introductory chapter is followed by the historiography of the *constcamer* genre. The literature review (chapter 2) includes the current state of research and specifies the gaps that this research seeks to address. The research design is central to the discussion of the methods and approaches (chapter 3). This chapter deals with the interface of the history of

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<sup>6</sup> Van der Veen, “Vorstellijke en Burgerlijke Verzamelingen,” 133 (my emphasis). The inventory of Laurentius Beyerlinck is kept in the Archives of the Cathedral of Our Lady, Antwerp, *Capsa Testamentorum* 485, June 25–29, 1627 (fol. 31v).

<sup>7</sup> See especially the volumes by Duverger, starting with Duverger, *Antwerpse Kunstinventarissen*.

<sup>8</sup> Honig makes a similar observation in relation to the “genre” of market images in Honig, *Painting & the Market*, 2.

art and visual culture, on the one hand, and digital tools and methodologies, on the other. After explaining what “digital art history” is, a detailed exposition of the practical and theoretical framework of this research follows.

The main body of this thesis is divided into four parts. Part I revolves around the theme of collecting and collections. Chapter 4 traces the origins of the underlying concepts back to classical antiquity. What were the motivations for collecting? And what kind of collections did the ancients assemble? The reception of their views in early modern Europe is outlined in chapter 5. How did they shape the understanding of cognition? And why did this appeal to artists? Chapter 6 concludes Part I with an overview of collecting practices of the fifteenth and sixteenth centuries. How were collections created and by whom? What were the purposes of picturing collections?

Part II focuses on the local historical and intellectual contexts in which constcamer paintings were created. Chapter 7 deals specifically with the Antwerp art scene. What were the conditions for the production of and trade in art? And what was the status of images after the local outbreaks of iconoclasm? Chapter 8 describes the influence of humanistic scholarship on the broader region. In what ways were the arts and sciences intertwined in the Duchy of Brabant, then part of the Spanish Habsburg Netherlands? And what kind of ethos did this kinship lead to?

Part III is entirely dedicated to the seventeenth-century genre of constcamer paintings. Chapter 9 proposes a definition of what a constcamer painting is, and therefore also what it is not. What developments led to the origins of the pictorial genre? How were such paintings created? And what are the criteria for being included in the constcamer catalogue? Chapter 10 offers an analysis of the constcamer catalogue and dataset. What can be learned from such an overview? How do constcamer paintings relate to other forms of

collections? Who were involved in the creation of constcamer paintings? And what kind of relationships can be discerned within the genre as a whole?

Part IV examines three case studies as examples of the potential of the digital methods used, and to provide deeper insight into salient aspects of constcamer paintings. Chapter 11 clarifies the inclusion of an unusual perpetual motion machine in the *Allegory of Hearing* [Cat. No. 134]. Is this a representation of Ghijsbrecht Donckere's "barometer," previously known only from descriptions? Why is the instrument included in an allegory of hearing? Chapter 12 discusses the manifestations of Ovid's myths of transformation in general, and those related to the Muses in particular, within the constcamer genre. What was the significance of the *Metamorphoses* and how did the Muses play a role in this context? Chapter 13 concludes Part IV with a case study on scientific instruments. What kinds are found in the constcamer catalogue and recorded in the dataset? Why are they depicted in certain contexts? And to what meanings and forms of knowledge do the pictures of collections in which they are included allude?

The conclusion (chapter 14) synthesizes the key findings from the preceding chapters and evaluates the opportunities and limitations of the constcamer dataset for the advancement of research on pictures of collections. It has proven to be essential to approach constcamer paintings from multiple angles to reveal how they serve as carriers of material and conceptual knowledge and contribute to the reconstruction of seventeenth-century ideas.<sup>9</sup> As visualized visions, constcamer paintings offer access to pictorial spaces of sight and insight and confront us with the impermanence of signification.

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<sup>9</sup> In modern Dutch, "ideas" translates as "*denkbeelden*," which literally means "thought-images."

## 2 Literature review

Two comprehensive accounts of the literature on the topic of constcamer paintings appeared about ten years ago. The first of these, compiled by Ariane van Suchtelen and Ben Van Beneden, is a catalogue accompanying the exhibition *Kamers Vol Kunst in Zeventiende-Eeuws Antwerpen (Room for Art in Seventeenth-Century Antwerp)* hosted by the Rubenshuis in Antwerp and subsequently the Mauritshuis in The Hague from November 2009 to June 2010.<sup>10</sup> The second publication is Alexander Marr's overview in Volume 20 of the *Intellectual History Review*, Issue 1 of 2010. This is a special issue edited by Marr and devoted to the topic of "Picturing Collections in Early Modern Europe."<sup>11</sup>

This chapter opens with an outline of the historical background of research on the topic of constcamer paintings up to and including 2010. The first section critically evaluates many of the references cited in the two sources mentioned above. Next, the most recent developments within this area of interest, in the period from 2011 to the present, are examined. The final section of this chapter summarizes and highlights the implications based on the literature review and develops the conceptual framework for the study. Constcamer paintings are introduced here as images of knowledge. The intellectual dimension of these seventeenth-century expressions of visual culture will be the common thread throughout this thesis.

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<sup>10</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*.

<sup>11</sup> Marr, "The Flemish 'Pictures of Collections' Genre."

## Historical background

The nineteenth century closed with what has become known as the first monograph on constcamer paintings: the *Gemalte Galerien* (1896) by Theodor von Frimmel.<sup>12</sup> He first published on this type of painting in his series *Kleine Galeriestudien* (*Small Gallery Studies*) of 1892,<sup>13</sup> but decided that constcamer paintings, which he called “painted galleries” (*gemalte Galerien*), constituted a separate category. Von Frimmel already noticed that while some constcamer paintings represent actual collections, such as the Brussels gallery of Archduke Leopold Wilhelm [e.g. Cat. No. 109], others could not be linked to known galleries. He suggested, therefore, that those must have been created from the imagination, uniting paintings that were never in a single collection.<sup>14</sup> As an art historian, von Frimmel’s focused primarily on the paintings reproduced in constcamer paintings.

Major progress on the subject was not made until sixty years later. The year 1957 saw the publication of two extensive studies on the genre of constcamer paintings.<sup>15</sup> Simone Speth-Holterhoff’s book *Les Peintres Flamands de Cabinets d’Amateurs au XVIIe Siècle* (*Flemish Painters of Amateur Cabinets in the XVIIth Century*) still stands out as the main body of work on the genre of “amateur cabinets” or galleries of enthusiasts (*cabinets d’amateurs*) as she referred to them. Her study was made possible in part by the publication of inventories of Antwerp collections, or rather of the paintings included in those collections, by Jean Denucé in 1932.<sup>16</sup>

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<sup>12</sup> von Frimmel, *Gemalte Galerien*. Due to the digitization efforts of the Universitäts-Bibliothek Heidelberg, this book is available online via <https://digi.ub.uni-heidelberg.de/diglit/frimmel1896> (accessed February 19, 2021).

<sup>13</sup> von Frimmel, *Kleine Galeriestudien*.

<sup>14</sup> von Frimmel, *Gemalte Galerien*, 2–3.

<sup>15</sup> Speth-Holterhoff, *Les Peintres Flamands*; Winner, “Die Quellen der Pictura-Allegorien.” A third publication of 1957 treated just one constcamer painting [Cat. No. 9]. See Held, “*Artis Pictoriae Amator*.”

<sup>16</sup> Denucé, *De Antwerpsche “Konstkamers”*; Speth-Holterhoff, *Les Peintres Flamands*, 41 & passim.

As the title of Speth-Holterhoff's work suggests, she focused on the creators of constcamer paintings, and structured the contents of her book accordingly. Many of the attributions are highly uncertain or have nowadays been disputed, but nevertheless Speth-Holterhoff managed to give an overview of the examples known to her at the time. The book functioned and functions as the starting point for anyone who wishes to familiarize themselves with the topic. References to approximately ninety constcamer paintings are made, only fifty-eight of which are illustrated with an image.

While Speth-Holterhoff merely alluded to a deeper truth beyond appearances as expressed in constcamer paintings, which she described as constructions of an ideal world on a reduced scale,<sup>17</sup> such forms of interpretation were central to Mathias Winner's approach to the genre. His dissertation *Die Quellen der Pictura-Allegorien in Gemalten Bildergalerien des 17. Jahrhunderts zu Antwerpen* (*The Sources of Allegories of Pictura in the Painted Picture Galleries of Antwerp in the 17th Century*) considered certain constcamer paintings to be self-representations of the art of painting.<sup>18</sup>

A similar approach was taken for the catalogue accompanying the exhibition *Het Schildersatelier in de Nederlanden 1500-1800* (*The Painter's Studio in the Netherlands 1500-1800*) hosted by De Waag in Nijmegen in 1964. The chapter by Taverne expands on the

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<sup>17</sup> Speth-Holterhoff, *Les Peintres Flamands*, 10. In 2010, Marr mistakenly stated that Speth-Holterhoff made "incorrect assumptions about the nature of the subject matter depicted in the paintings concerned, a prime example being the assertion that several gallery interiors should be considered 'portraits' of actual collections or dealers' shops." See Marr, "The Flemish 'Pictures of Collections' Genre," 24. On the contrary, Speth-Holterhoff explains that painters sought their inspiration for constcamer paintings in the best-known collections in seventeenth-century Antwerp, sometimes creating an exact image of a collection of famous artworks (with the focus on the works of art themselves, not necessarily their display), sometimes a fanciful version of a pictorial ensemble. The only time she mentions a dealers' shop is in relation to a certain constcamer painting that she identified as *The Shop of Jan Snellinck* in 1948, nowadays referred to as *Connoisseurs in an Art Collection* (1621) [Cat. No. 67]. Speth-Holterhoff thought of this constcamer painting as the only contemporary evocation of an art shop, but this interpretation has since been refuted (see chapter 10). Speth-Holterhoff, *Les Peintres Flamands*, 11, 63–64 & passim.

<sup>18</sup> Winner, "Die Quellen der Pictura-Allegorien," 2.

theme of portraying the art of painting.<sup>19</sup> The emphasis is again on the paintings depicted in constcamer paintings despite the presence of other arts that, according to Winner, are secondary to *Pictura*.<sup>20</sup>

An insightful study by Robert Scheller that covers both collections and pictures of collections appeared in 1969.<sup>21</sup> By carefully considering what is meant by a *Kunst- und Wunderkammer*, a German term frequently used to denote early modern collections,<sup>22</sup> Scheller reflects on its usefulness with regard to the Dutch-speaking Low Countries. Based on inventories and “painted art rooms” (*geschilderde kunstkamers*), which he relates to encyclopedic collections, Scheller believed that too much attention has been paid to the depicted paintings at the expense of the other objects.<sup>23</sup> A correct observation, which he reinforced by stressing the seventeenth-century conception of the senses, the classical philosophical views on the *mundus sensibilis* and *mundus intelligibilis*, and the ideal of Virtue.<sup>24</sup> According to Scheller, constcamer paintings can be seen as demonstrations of *Pictura*’s dominance over the other liberal arts, since painting alone can process and show “nature” (*mundus sensibilis*) and “spirit” (*mundus intelligibilis*) in all their manifestations.<sup>25</sup>

In 1980, the study of constcamer paintings was enriched by yet another perspective, that of originals, copies, replicas and paraphrases, as presented in an exhibition catalogue.<sup>26</sup> Jan Briels, on the other hand, worked out Scheller’s statements by proposing that constcamer (which he spelled as *constkamer*) paintings represent *sapientia humana*, or one

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<sup>19</sup> Taverne, “*Pictura*.”

<sup>20</sup> Winner, “Die Quellen der *Pictura*-Allegorien,” 126.

<sup>21</sup> Scheller, “Rembrandt en de Encyclopedische Kunstkamer,” 1969.

<sup>22</sup> This topic was first addressed scientifically in 1908 in Schlosser, *Die Kunst- und Wunderkammern*.

<sup>23</sup> Scheller, “Rembrandt en de Encyclopedische Kunstkamer,” 110–111.

<sup>24</sup> Scheller, 112–114.

<sup>25</sup> Scheller, 113.

<sup>26</sup> Hutter, *Original – Kopie – Replik – Paraphrase*.

of the possibilities to come to an intellectual insight into the world and the cosmos.<sup>27</sup> The reason Briels' publication has been largely overlooked is probably the harsh commentary of Justus Müller Hofstede four years later, who in his influential study of Jan Brueghel I and Peter Paul Rubens' *Allegory of Sight* (1617) [Cat. No. 17] stated that he was not convinced by the former's efforts to link the Neostoic philosophy of Justus Lipsius to the genre of constcamer paintings.<sup>28</sup>

In the same decade, the topic of pictures-within-pictures was the subject of another exhibition,<sup>29</sup> and Ursula Härting finished her dissertation on Frans Francken II, a prolific creator of constcamer paintings.<sup>30</sup> In addition, a start was made with the publication of Antwerp art inventories of the seventeenth century.<sup>31</sup> Ruud Ringers wrote on the representation of art and artistry in Antwerp constcamer paintings in 1987.<sup>32</sup> His article is largely based on the work of Briels with few new additions.

The year 1987 also saw the publication of *Picturing Art in Antwerp, 1550-1700* by Zirka Zaremba Filipczak, who worked along the interpretative strand of research as set forth by Winner.<sup>33</sup> Filipczak's study of the genre of constcamer paintings focused on literary contexts rather than the pictorial contents of the works of art, but nevertheless proposed a historical development. Her categorization of "gallery paintings" or "pictures of collections

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<sup>27</sup> Briels, "Amator Pictoriae Artis," 64.

<sup>28</sup> Müller Hofstede, "'Non Saturatur Oculus Visu,'" especially 281 (note 93).

<sup>29</sup> Welu, *The Collector's Cabinet*. A first exhibition of this kind was held at the Wadsworth Atheneum in Hartford (CT) in 1949, and accompanied by a list of exhibited works. Cunningham, *Pictures within Pictures*.

<sup>30</sup> Härting, *Studien zur Kabinettbildmalerei*, 1983. See especially chapter V, sections A and B on "Stilleben, Preziosenwände" and "Galerieinterieurs," respectively. Härting opens her work with an expression of gratitude to her supervisor, Müller Hofstede (see note 28).

<sup>31</sup> Duverger, *Antwerpse Kunstinventarissen: 1*. The series, which comprises fourteen parts, was only completed in 2009.

<sup>32</sup> Ringers, "De Verbeelding van de Kunst."

<sup>33</sup> Filipczak, *Picturing Art in Antwerp*.

on display,” although not based on an actual overview of the genre, proved influential for the next generation of researchers that held on to the chronology she proposed.<sup>34</sup>

In 1992, three large volumes on the topic appeared, two of which originated from southern Europe.<sup>35</sup> A Spanish exhibition catalogue was published by the Museo del Prado in Madrid, including the many constcamer paintings or “*Gabinetes de Pinturas*” in their collection.<sup>36</sup> About eighteen constcamer paintings are thoroughly analyzed, albeit again mostly limited to the depicted paintings whose locations are indicated with diagrams [Fig. 227]. The publication by Ekkehard Mai and Hans Vlieghe accompanied an exhibition held in Cologne, Antwerp and then Vienna over the course of two years. Several examples are reviewed in two chapters dealing with the allegory of painting in the “*constkamer*” and the “*Galeriebild*” as a reflection of the collecting activities in Antwerp.<sup>37</sup>

Independently of these exhibition catalogues, Annalisa Scarpa Sonino published her studies on constcamer paintings from the seventeenth to the nineteenth centuries. Her goal was to offer a first *catalogue raisonné* of the *cabinet d’amateur*. The structure of this catalogue is similar to Speth-Holterhoff’s approach, in other words based on artists. Nevertheless, it remains unclear to me why Scarpa Sonino selected the works she did, excluding so many of the constcamer paintings that must have been known to her on the basis of the aforementioned earlier publications. At the same time, Scarpa Sonino lists twenty-seven works by Frans Francken II, but includes only twelve of those in her *catalogue*

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<sup>34</sup> According to Filipczak, the following subjects predominated in succession: ca. 1550-ca. 1600 “portraits of artists at work;” ca. 1610-ca. 1640 “encyclopedic galleries with art on display;” ca. 1640-ca. 1700 “painting (and sculpture) galleries;” ca. 1700 and onwards “artists’ studios.” See Filipczak, 5 & chapter 7.

<sup>35</sup> Díaz Padrón and Royo-Villanova, *David Teniers*; Mai and Vlieghe, *Von Bruegel bis Rubens*; Scarpa Sonino, *Cabinet d’Amateur*.

<sup>36</sup> Díaz Padrón and Royo-Villanova, *David Teniers*. Ten paintings of the Museo del Prado’s collection are included in the constcamer catalogue [Cat. Nos. 16, 17, 43, 53, 83, 116, 134, 135, 136 and 137]. This is by far the largest number within a single collection.

<sup>37</sup> Mai, “Pictura in der ‘Constkamer’”; Schütz, “Das Galeriebild.” The denominations reflect the book chapter by Briels and the dissertation by Winner, respectively.

*raisonné*.<sup>38</sup> In total, the catalogue contains sixty-eight constcamer paintings. Fifty-one of these were created before, and seventeen after, 1700.

Ursula Härting continued her work on Frans Francken II, and more specifically his constcamer paintings. She suggested that this painter was the inventor, or pioneer, of the genre, which supposedly emerged between 1605 and 1610.<sup>39</sup> Victor Stoichita, on the other hand, further developed the idea that the genre was part of a new form of visual experimentation, an expression of art reflecting on itself.<sup>40</sup> Subsequently more publications, smaller in scope, emerged on the topic of constcamer paintings. Some dealt with a single example,<sup>41</sup> while others highlighted just one aspect of the genre (e.g. sculpture)<sup>42</sup> or dealt with the subject only in passing.<sup>43</sup> Gary Schwartz's article of 1993 deserves special mention, because it established the unsubstantiated notion that there are less than one hundred known examples (see chapter 1).<sup>44</sup>

In 1998, Elizabeth Honig examined constcamer paintings in the last chapter of her book on trade and art in sixteenth- and seventeenth-century Antwerp, especially in relation

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<sup>38</sup> Scarpa Sonino, *Cabinet d'Amateur*. The list can be found on page 50 and is an extension of Härting's, see Härting, *Frans Francken der Jüngere*. Scarpa Sonino acknowledges that the list cannot be complete, because of losses over time and difficulties with locating the artworks, which have been traded frequently over the past centuries. In addition, of the fourteen paintings of the picture galleries of Leopold Wilhelm that are listed on page 81, only twelve are included in the catalogue.

<sup>39</sup> Härting, *Frans Francken der Jüngere*, 83; Härting, "Doctrina et Pietas."

<sup>40</sup> Stoichiță, *The Self-Aware Image*. Originally published in 1993, and reviewed by Christopher Wood in 1999. The following remark by Wood rings especially true: "The text makes many assertions that turn out to be hard to prove." Wood, "Review of 'The Self-Aware Image,'" n.p.

<sup>41</sup> Schwartz, "Lady Pictura Painting Flowers," [Cat. No. 38]; Buijsen, "Schildersportretten in een Antwerpse Kunstkamer," [Cat. No. 38]; Peeters, "Venturing into the Interior," [Cat. No. 67]; Gordon, "Pentimenti," [Cat. No. 49]; Gorman and Marr, "Others See It Yet Otherwise," [Cat. No. 73]; Welzel, "Armoury and Archducal Image," [Cat. No. 135].

<sup>42</sup> Van der Schueren, "De Kunstkamers van Frans Francken II"; Schwartz, "Love in the Kunstkamer"; Wettengl, "Kunst über Kunst"; Rosenthal, "Venus's Milk and the Temptations of Allegory"; Marcaida López, "Portraying Technology."

<sup>43</sup> Pomian, *Collectors and Curiosities*; Klinge, *David Teniers de Jonge*; Vlieghe, *Flemish Art and Architecture*; Kleinert, *Atelierdarstellungen*; Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*; Recht, Périer-d'Ieteren, and Meeus, *Het Meesterlijke Atelier*; Prosperetti, *Landscape and Philosophy*.

<sup>44</sup> Schwartz, "Lady Pictura Painting Flowers," 66. With special thanks to Gary Schwartz himself, who informed me by email on May 28, 2018 that his claim was not based on a census campaign.

to the display of things and their aesthetic appreciation by the beholder.<sup>45</sup> Subsequently, Heinrich Becker dedicated the first chapter of his dissertation of 2005 to the iconography of the beholder of artworks (*Kunstabetrachters*) in constcamer paintings.<sup>46</sup> That same year saw the publication of a Dutch volume on the history of collecting, discussing the genre along with material collections and collecting practices.<sup>47</sup> Lastly, the third part of Ulrike Ganz' dissertation of 2006 approaches constcamer paintings as discourses on "curious seeing."<sup>48</sup> She argued that pictures of collections acted as models formulating visual experiences that a viewer ideally could or should have in a *Kunstkammer*, whose utopian goal was to recover Adamic knowledge.<sup>49</sup> This entails the omniscience of humankind before the Fall and expulsion from the Garden of Eden.

The two major publications referred to in the introduction of this chapter appeared in 2009 and 2010.<sup>50</sup> The exhibition catalogue by van Suchtelen and Van Beneden introduces the genre and elaborates on two aspects: the painter-curator Willem van Haecht II, and "collaborative gallery paintings." Both participating museums, the Mauritshuis and the Rubenshuis, own an iconic work of the genre by van Haecht [Cat. Nos. 8 and 9]. In addition, a constcamer painting created by a group of artists is part of the Mauritshuis' collection [Cat. No. 12]. The term "collaborative" will prove too ambiguous, since constcamer paintings were more often than not created by more than one painter, and will be replaced with

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<sup>45</sup> Honig, *Painting & the Market*, 170–212. A highly influential publication on the Antwerp art market (1490–1609) appeared shortly after in 2003. Vermeulen, *Painting for the Market*.

<sup>46</sup> Becker, "Studien zur Ikonographie," 31–93. The remaining two chapters discuss the eighteenth and nineteenth centuries, respectively. The beholder is already central to Honig, "The Beholder as Work of Art."

<sup>47</sup> Reference will be made to the revised edition of 2013. Bergvelt et al., *Kabinetten, Galerijen en Musea*, 117–44. A prominent international precursor on this topic is Impey and MacGregor, *The Origins of Museums*.

<sup>48</sup> Ganz, *Neugier & Sammelbild*, 193–227. Her interpretation is mainly informed by Pomian, *Collectors and Curiosities*; Stoichiță, *The Self-Aware Image*.

<sup>49</sup> Ganz, *Neugier & Sammelbild*, 220.

<sup>50</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*; Marr, "The Flemish 'Pictures of Collections' Genre."

“collective” to distinguish this form of collaboration within the constcamer genre (see chapters 7 and 9).

The special issue of the *Intellectual History Review* includes five articles on constcamer paintings, of which Marr’s introductory overview stands out.<sup>51</sup> Contrary to what the title might suggest, his article does not so much provide an overview of the genre as it does of the existing scholarship on the genre up to 2010. Consequently, the article perpetuates certain views that are uncritically repeated in the literature, such as Filipczak’s chronology and Schwartz’s suggestion that “around 100” constcamer paintings have been preserved.<sup>52</sup> An original contribution by Marr was to connect multiple drawings to the painterly genre. The article concludes that much work remains to be done in order to further our understanding of the complex images.<sup>53</sup> It is my aim to undertake such a task by creating an actual overview of the constcamer genre.

## Recent developments

The literature of the last ten years is characterized by a strong focus on one creator of constcamer paintings in particular, namely Frans Francken II. Three major studies stand out in this regard – the dissertations by Marlise Rijks (defended in 2016),<sup>54</sup> Esther Samouelian (defended in 2017),<sup>55</sup> and Jamie Richardson (work in progress).<sup>56</sup> Even though each of these

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<sup>51</sup> The other articles are DiFuria, “Maerten van Heemskerck’s Collection Imagery”; Dupré, “Trading Luxury Glass”; de Vries, “The Hand of the Artist”; Peterson, “The Five Senses”; Gage, “Some Stirring or Changing of Place.”

<sup>52</sup> Marr, “The Flemish ‘Pictures of Collections’ Genre,” 6–7.

<sup>53</sup> Marr, 25.

<sup>54</sup> Rijks, “Catalysts of Knowledge.” Her supervisors were Prof. dr. Koenraad Jonckheere and Prof. dr. Sven Dupré. I am very thankful to Marlise Rijks for sharing her thesis with me.

<sup>55</sup> Samouelian, “La Peinture Religieuse dans les Cabinets d’Amateurs.” This protected thesis was not consulted on the advice of thesis supervisor Prof. dr. Colette Nativel.

<sup>56</sup> Richardson is a PhD candidate at Bryn Mawr College, supervised by Prof. dr. Christiane Hertel.

doctoral studies has a different approach, all three concentrate exclusively on the early constcamer paintings created by Frans Francken II, who was active in Antwerp from 1599 to 1642, and his circle.

Rijks relied heavily on archival sources to study the collections of Antwerp artists and artisans and possible similarities to the contemporary constcamer genre, and thus the relationships between creators and collectors. In her view, pictures of collections may be interpreted as intellectual reflections on the culture of collecting.<sup>57</sup> Richardson's dissertation, on the other hand, promises to examine the development of the constcamer genre by Frans Francken II in relation to the early modern culture of curiosity.<sup>58</sup> Lastly, Samouelian focused on the religious paintings included in the "metapictorial" genre and suggests that there is an overarching theme underlying each example of a constcamer painting.<sup>59</sup> Based on her published work, however, this suggestion is not convincing.<sup>60</sup> Instead, this thesis will argue that a constcamer painting represents a multitude of interpretations rather than a single fixed meaning.

In addition, several publications, of smaller scope, engaged with the subject. Again, some dealt with a single constcamer painting,<sup>61</sup> while others highlighted just one aspect of

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<sup>57</sup> Rijks' thesis will be published later this year (2021). Rijks, *Artists' and Artisans' Collections*.

<sup>58</sup> Project description available at <https://www.brynmawr.edu/ggacha/history-art/current-students-history-art> (accessed February 22, 2021).

<sup>59</sup> Based on the thesis abstract available through the library catalogue of Université Paris 1, Panthéon Sorbonne. [http://kiwi.univ-paris1.fr/F/2875S161SK9H4YE8XX8BFQY2B5R7HIPF2D7L3NLT3J4MY4LX9F-12994?func=find-acc&acc\\_sequence=006245634](http://kiwi.univ-paris1.fr/F/2875S161SK9H4YE8XX8BFQY2B5R7HIPF2D7L3NLT3J4MY4LX9F-12994?func=find-acc&acc_sequence=006245634) (accessed February 22, 2021).

<sup>60</sup> Samouelian, "Hercule et Bacchus dans un Cabinet d'Amateurs," 63–93. Samouelian selectively considers painting and sculpture in determining the overarching theme, and therefore not the overall picture. For example, she only mentions the bird-of-paradise and the *perpetuum mobile* included in the *Gallery of Art Objects* [Cat. No. 6], but does not offer any suggestions why these elements – both of which are, for example, related to God and perpetual motion (see chapters 10 and 11) – are part of the depicted collection.

<sup>61</sup> Magnus, "Schilders, Connoisseurs en hun (Salomons)Oordeel," [Cat. No. 11]; Samouelian, "Hercule et Bacchus dans un Cabinet d'Amateurs," [Cat. No. 6]; Rosenthal, "Frans Francken the Younger's Discovery of Achilles," [Cat. No. 107]; Marr, "Ingenuity and Discernment," [Cat. No. 9].

the genre (e.g. iconoclastic donkeys)<sup>62</sup> or dealt with the subject only in passing.<sup>63</sup> Some recurring features can be identified in this literature. First of all, the preference for early examples of the constcamer genre, by Rijks, Lisa Rosenthal and Christine Göttler. Secondly, the examination of individual artists who created constcamer paintings, among other things, by Honig and Nadia Baadj. Thirdly, the interest in art and science in the context of the Spanish Habsburgs, their collecting practices and the pictures of collections preserved in Spain, by José Ramón Marcaida López and Margarita Ana Vázquez Manassero.

## Summary and implications

Academic research on the constcamer genre commenced in the late 1890s. Over the years, different terms have been used to designate this type of painting, depending on language area and personal preferences. This research uses the seventeenth-century Dutch term *constcamer* because it comes closest to contemporary designations (see chapter 1). The *const* in *constcamer* refers to the arts in a broad sense, not just the *schilder-const* or painting,<sup>64</sup> but nonetheless historiography has tended to focus on the paintings depicted in *constcamer* paintings. Some dissenting voices mainly emphasized the usefulness of relating contemporary collecting practices to pictures of collections.

In the absence of preserved material collections, considerable attention has been paid to Antwerp inventories, even though von Frimmel noted as early as 1896 that many

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<sup>62</sup> Rosenthal, “Art Lovers, Pictura, and Masculine Virtue”; Rijks, “Defenders of the Image”; Rosenthal, “Precarious Personification”; Göttler, “Indian Daggers with Idols”; Yeager-Crasselt, “Knowledge and Practice”; Göttler, “Extraordinary Things”; Rijks, “Unusual Excrescences of Nature”; Rijks, “A Painter, a Collector, and a Horseshoe Crab.”

<sup>63</sup> Marcaida López, *Arte y Ciencia*; Baadj, *Jan van Kessel I*; Honig, *Jan Brueghel*; Vázquez Manassero, *El “Yngenio” en Palacio*.

<sup>64</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4r-\*4v.

constcamer paintings were created from the imagination, uniting paintings that were never in a single collection. Therefore other forms of collecting, as well as the origins and purposes of collecting, seem particularly relevant. The constcamer genre's relationship to classical philosophy and practices of visually shaping conceptions and ideas, as hinted at by Scheller, may be further explained. Investigating the role and meaning of "curiosity" and "a longing to learn" specifically in relation to constcamer paintings seems to be a meaningful approach.<sup>65</sup>

The intellectual dimension of constcamer paintings, representing not only painting but also other arts and sciences, is evident from the literature review. Other observations that emerge are the large number of exhibitions on the subject and the emphasis on the (collaborative) production and reproduction of paintings. Yet except for Speth-Holterhoff and Scarpa Sonino, none of these discussions are concerned with creating an overview of the constcamer genre. Van Suchtelen even stated that *as far as can be ascertained* no more than about a hundred paintings have been preserved.<sup>66</sup> Today, however, this is no longer valid, not least because of advances in computer science. A concrete delineation of the subject, which does not yet exist, is required and will be limited to the seventeenth century for this project.

By extension, without an overview of the genre there is also no overview of what is depicted in constcamer paintings. Up to now, only the pictorial content of some constcamer paintings has been studied in detail, or a certain aspect of the genre has been highlighted in relation to one or more pictures of collections. Great potential can be found in digital tools and methodologies for the documentation of the things recorded in constcamer paintings at

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<sup>65</sup> This phrasing refers to an article by Lien Foubert that inspired me to take a closer look at the classical origins of these notions. Foubert, "Men and Women Tourists' Desire."

<sup>66</sup> "Voor zover valt na te gaan zijn er niet meer dan zo'n honderd schilderijen bewaard gebleven." See van Suchtelen and Van Beneden, *Kamers vol Kunst*, 19.

large. A digital approach that re-views the genre will serve to test previous assumptions and interpretations. This study will broaden the contextual scope by firmly placing constcamer paintings within the humanist culture of the sixteenth- and seventeenth-century (Spanish) Habsburg Netherlands in which the genre originated and developed.

### Constcamer paintings as images of knowledge

In line with early modern art theories, as formulated by the artist Federico Zuccaro (see chapter 5) and others, art will be seen as a form of knowledge.<sup>67</sup> Historical artworks are thus in a sense knowledge objects or *Erkenntnisobjekte* in German, although rarely explicitly approached as such.<sup>68</sup> The resulting working hypothesis is that constcamer paintings represent (a desire for) knowledge. The inclusion of “a desire for” is informed by the opening line of Aristotle’s *Metaphysics* (see chapter 4).<sup>69</sup> Since pictures of collections represent subjects and objects of knowledge, they themselves become objects or rather images of knowledge. Nowadays there is a trend to speak of epistemic images when dealing with images that seek to “produce, represent, or communicate” knowledge.<sup>70</sup>

The term *episteme* finds its origins in ancient philosophy. For Aristotle, it was one of the five forms of true knowledge: *episteme* in ancient Greek or *scientia* in Latin meaning science or universal knowledge; *techne* or *ars* meaning art or skill; *phronesis* or *prudentia* meaning prudence; *nous* or *intellectus* meaning insight; and *sophia* or *sapientia* meaning wisdom.<sup>71</sup> For Foucault, over two millennia later, an *episteme* is a field “in which knowledge

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<sup>67</sup> This formulation is put forward in Berger, *The Art of Philosophy*, 182.

<sup>68</sup> Drucker, *Visualization and Interpretation*, 20.

<sup>69</sup> Aristotle, *Metaphysics*, 1.980a.

<sup>70</sup> Marr and Heuer, “Introduction,” 253.

<sup>71</sup> Lohr, “Aristotelian ‘Scientia,’” 261–62.

[...] grounds its positivity and thereby manifests a history which is not that of growing perfection, but rather that of its conditions of possibility.”<sup>72</sup>

Recent attempts to define what is epistemic about certain images emphasize the intention with which they were made.<sup>73</sup> The “intention of expressing, demonstrating or illustrating a theory,” for example, or the “intent not only of depicting the objects of scientific inquiry but also of replacing it.”<sup>74</sup> These definitions raise questions about the retrievability of such intentions, especially when contextual information about the creation and the creator(s) has been lost. A focus on intent also upholds the outdated notion of the authenticity of early modern works of art, especially regarding paintings.<sup>75</sup> At the same time, it should be noted that all images contain (assumptions about) knowledge.<sup>76</sup>

Approaching constcamer paintings as images of knowledge implies a contemporary (desire for) knowledge on the part of both creators and commissioners or owners. In addition, one may wonder what kind of knowledge is involved, and how this knowledge could be acquired. After all, in the early modern period “structures of knowledge and methods of knowledge production” were undergoing rapid changes.<sup>77</sup> This thesis will argue that pictures of collections primarily lay claim to the active intellect, the *nous poietikos* in Aristotelian terms, which was deemed to be expandable through visual encounters with materialized subjects and objects.

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<sup>72</sup> Foucault, *The Order of Things*, xxiii–xxiv.

<sup>73</sup> Marr, “Knowing Images,” 1005. See also Klinke, *Art Theory as Visual Epistemology*.

<sup>74</sup> Lüthy and Smets, “Words, Lines, Diagrams, Images,” 399 (note 2); Daston, “Epistemic Images,” 17–18.

<sup>75</sup> Guichard, “What Is Authenticity?,” 1387–1401.

<sup>76</sup> Drucker, *Visualization and Interpretation*, 21; Marr and Heuer, “Introduction,” 253.

<sup>77</sup> Marr and Heuer, “Introduction,” 253.

### 3 Methods and approaches

To re-view the pictorial content of constcamer paintings, this study uses digital tools and methodologies in conjunction with traditional art historical methods. The use of digital tools in art history is often still considered a distinct sub-discipline: digital art history. This sub-discipline is as much related to art history as it is to digital humanities. Most recently, the domain of digital humanities was characterized as “a growing field within the Humanities dealing with the application of digital methods to humanities research on the one hand as well as addressing questions about the influence of digital practices on research practices within the different humanities disciplines on the other.”<sup>78</sup> This study also covers both aspects, but within the context of art history.

This chapter discusses the rationale behind the use of digital tools and methodologies to collect, archive, and analyze a dataset of 161 constcamer paintings and the information relating to them. The first section introduces the current state of research in the field of digital art history, and additionally discusses the methodological perspectives generally used in the discipline of art history. The intersection of the two domains – datasets on the one hand, and pictorial analysis on the other – is then examined through two preliminary case studies, as a means of exposing current complications involved in constructing datasets for the purpose of answering art historical questions.

In the next section, existing projects will be used to illustrate best practices and opportunities for successfully converting images into data, and for managing this data. The need for a database schema will be discussed with respect to the constcamer dataset and its

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<sup>78</sup> Schwandt, *Digital Methods in the Humanities*, 7.

constituent parts. The practicalities of collecting images and annotating them are described in great detail, since insight into this process gives insight into what can be expected from the constcamer dataset. From a theoretical point of view, it will be clarified that the dataset is inevitably full of idiosyncrasies, and that additional layers of interpretation are required to extract knowledge from the data and from (the images of) the constcamer paintings themselves. This chapter concludes with a reflection on the possibilities and limitations of the chosen approach.

## Digital art history

In the year this project started (2017), the lack of availability of datasets was characterized in the report on the symposium Art History in Digital Dimensions as “the primary obstacle for many art historians and students.”<sup>79</sup> Creating datasets is the main work being done in the field of digital art history and, at the same time, an ongoing trend to digitize museum collections is contributing to the accessibility of artworks. “Yet even with these available resources,” the 2017 report continues, “the majority of researchers will have to develop their own dataset. For many, compiling this dataset has the potential to be more challenging than mastering new software.”<sup>80</sup> It requires a way of working in which art historians are not usually trained.

Digital art history “has become a shorthand reference to the potentially transformative effect that digital technologies hold for the discipline of art history.”<sup>81</sup> In the

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<sup>79</sup> Bury et al., “Art History in Digital Dimensions,” 11.

<sup>80</sup> Bury et al., 11.

<sup>81</sup> <https://www.getty.edu/foundation/initiatives/current/dah/> (accessed February 25, 2021). This definition was formulated in the early 2010s.

2013 special issue of *Visual Resources* dedicated to digital art history, Johanna Drucker posed the controversial question, “Is There a ‘Digital’ Art History?” She proposed a distinction between *digitized* art history, characterized as making use of online repositories and images, and *digital* art history, where computational technology allows the use of analytic techniques.<sup>82</sup> Computational analysis alone, however, cannot replace argumentation and interpretation.<sup>83</sup> Subsequent research has shown that Drucker’s distinction no longer holds.<sup>84</sup>

It remains to be seen if computational analysis will ever gain the same importance in art history as in disciplines within the humanities that are primarily text-based.<sup>85</sup> In art history, material artifacts without inherent digital representation are traditionally the starting point of study. As Georg Schelbert pointed out, the interpretation of art and its historical context is an intellectual and theoretical process. But the ways in which information is structured and links between data are made influence the interpretation of that data.<sup>86</sup> The latest digital art history special edition of *Visual Resources* (2019) similarly highlights that “creating a database is anything but straightforward and that its complications cannot be separated from disciplinary, socio-historical, and ideological contexts.”<sup>87</sup>

The reassessment of the current state of research in the field of digital art history mainly reveals that “data sets are not ‘interpretations’ or ‘conclusions’ in and of themselves; all hypotheses and interpretations must be made by examining data in conjunction with

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<sup>82</sup> Drucker, “Is There a ‘Digital’ Art History?,” 7; Zweig, “Forgotten Genealogies”; Bentkowska-Kafel, “Debating Digital Art History.”

<sup>83</sup> Bishop, “Against Digital Art History.”

<sup>84</sup> Schelbert, “Digital Art History,” 54. In a more recent publication, Drucker fully acknowledges the importance of interpretation for the humanities. Drucker, *Visualization and Interpretation*.

<sup>85</sup> Schelbert, “Digital Art History,” 48; Manovich, “Data Science and Digital Art History.”

<sup>86</sup> Schelbert, “Digital Art History,” 54–55.

<sup>87</sup> Baca, Helmreich, and Gill, “Digital Art History,” 2.

historical knowledge and taking into consideration the contexts in which the works and artists exist.”<sup>88</sup> However, the focus on databases within digital art history seems to come at a cost.

In 2012 Schelbert identified “image analysis and image annotation” (*Bildanalyse und Bild-Annotation*) as one of the six areas of work in digital art history. This aspect had disappeared from his list of 2018.<sup>89</sup> A similar trend can be discerned in the contributions to *The Routledge Companion to Digital Humanities and Art History* of 2020.<sup>90</sup> None of the thirty-four chapters deals explicitly with the pictorial analysis and annotation of images. Whenever images are referenced in this book, the focus is limited to the formal analysis of artworks rather than offering interpretations of what is depicted and its associated meanings. The latter not only forms the core of this study but has also traditionally been at the heart of art historical research.

### Art history

The discipline of art history revolves around objects (e.g. paintings) and images (e.g. that which is represented in paint). Stories on the origins of art in general, and painting in particular, can already be found in Pliny the Elder’s *Naturalis Historia* (77–79 AD), for example.<sup>91</sup> They all have in common that the outlines of a person's shadow are traced. By the seventeenth century the art of painting had definitely become more sophisticated, and a wide variety of materials was being used to create (e.g. oil paint) and support (e.g. panel)

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<sup>88</sup> Baca, Helmreich, and Gill, 3.

<sup>89</sup> Schelbert, “Digital Art History,” 45. The 2018 list consists of: innovative search strategies and tools; cross-media semantic linking and enrichment of information units; social media; reception research; digital visualizations and diagrams; and digital communication of art historical knowledge.

<sup>90</sup> Brown, *The Routledge Companion*.

<sup>91</sup> Pliny, *The Natural History*, 35.5.

the image. The study of constcamer paintings within this project is primarily concerned with the analysis and interpretation of the image, rather than its materiality.<sup>92</sup>

For example, it is certainly impressive to experience the grandeur of Rembrandt's *The Night Watch* (1642) physically and aesthetically in the Rijksmuseum. But in order to examine and understand the iconographic meaning embedded in the image – a meaning which is both sociohistorically and culturally determined – the artwork can equally be studied from a screen, print, or other forms of reproduction.<sup>93</sup>

To study the contents of constcamer paintings, this project does not focus on applying one single method or theory. In line with the recommendations of Katharina Lorenz, a “multilateral, multi-method approach” is used, combining formalized methods such as iconology, semiotics, and image studies in order to study and interpret these images.<sup>94</sup> This means that, first of all, the pictorial properties of the artworks are looked at. The content of the images informs analysis and dictates the subsequent research necessary for interpretation. This is a process of looking, seeing or cognitively identifying what it is we are looking at, and determining meaning.<sup>95</sup> The practical and theoretical aspects of this process will be outlined in detail below, following the two sections on preparatory studies and data management.

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<sup>92</sup> The branch of art history that deals with the materiality of artworks is called technical art history.

<sup>93</sup> See for example the highly detailed photograph of *The Night Watch* available via <https://www.rijksmuseum.nl/en/nightwatch> (accessed February 25, 2021).

<sup>94</sup> Lorenz, *Ancient Mythological Images*, 245. See also Lorenz, “Art History and Intellectual History.”

<sup>95</sup> This roughly corresponds to the three steps of iconology (i.e. phenomenal meaning, meaning dependent on content, and documentary meaning), or semiotic triangulation (of object, sign, and connotation). See Panofsky, “On the Problem,” 482; Lorenz, *Ancient Mythological Images*, 105.

## Preliminary study: datasets and pictorial analysis

Present-day digital art history projects often focus on the contextual information that surrounds works of art, for example when conducting art market studies and provenance research.<sup>96</sup> This is understandable from a data point of view, since context usually deals with text and numbers rather than images.<sup>97</sup> Projects that, on the other hand, include the iconographic meaning of artworks to a greater or lesser degree are often related to museums. Online museum catalogues such as those of the Rijksmuseum and the Walters Art Museum sometimes indicate what is depicted in the digital images of works from their collections.<sup>98</sup> In this way, users are given additional ways to search and explore the data.

The use of such existing datasets, however, is not straightforward. This was already discussed by Hans Brandhorst in 2013. According to him, the “real question is whether in documenting our sources the field will ever be able to keep one step ahead of researchers, providing them with ready-made answers when they are asking new questions.”<sup>99</sup> The question central to this section is what kind of art historical research questions can be answered using existing datasets? To this end the datasets of two museums at the forefront of collection digitization, the Rijksmuseum and the Metropolitan Museum of Art, were studied. Testing the usability of these existing datasets served to get a better grip on the requirements for a constcamer dataset.

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<sup>96</sup> Examples of such projects are the *London Gallery Project* and *Mapping Titian*, respectively. <http://learn.bowdoin.edu/fletcher/london-gallery/>; <http://www.mappingtitian.org/> (both accessed February 25, 2021).

<sup>97</sup> Furthermore, “The lack of trained individuals to describe visual content is a continuing impediment to providing access to photographic and other visual collections,” as noted in Beaudoin, “Describing Images,” 389.

<sup>98</sup> Getty Foundation, “Museum Catalogues in the Digital Age”; Quimby, “Digital Catalogues Study.” See for example <http://hdl.handle.net/10934/RM0001.collect.96871>; and <https://art.thewalters.org/detail/14623/the-archdukes-albert-and-isabella-visiting-a-collectors-cabinet/> (both accessed February 25, 2021).

<sup>99</sup> Brandhorst, “Aby Warburg’s Wildest Dreams Come True?,” 76.

## Rijksmuseum

The Rijksmuseum, Amsterdam, shares the data and associated images of its collection (ca. one million objects) online via an Application Programming Interface (API).<sup>100</sup> Using this API, a subset was requested limited to the paintings in the Rijksmuseum collection (ca. 6,000 paintings) that are accompanied by an image (4,399 paintings) and detailed annotations (1,818 paintings). The resulting subset after filtering, consisting of 1,677 images and data, were analyzed and visualized.<sup>101</sup> A stimulus for this exploration was an observation made by Lev Manovich, who noted the following.

Using modern data analysis and visualization software, we can generate multiple views of the same data quickly and compare them. This helps us to expand our understanding of a cultural phenomenon, and also notice the relations and patterns we did not see before. In other words, data science allows us not only just to see the data that is too big for our unaided perception and cognition; it also allows us to see data of any size (including very familiar canonical cultural datasets) *differently*.<sup>102</sup>

The Rijksmuseum subset seemed a good starting point to test the validity of this observation, even though Manovich had larger datasets in mind.

To identify what is depicted in the subset of paintings, the title and description provided by the Rijksmuseum's API were found most useful, since each object was given at least a title and a description. An additional possibility was the approach via Iconclass codes, but these were only used in relation to 671 of the 1,677 paintings. Iconclass is "a multilingual

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<sup>100</sup> <https://data.rijksmuseum.nl/object-metadata/api/> (accessed February 25, 2021).

<sup>101</sup> Based on the data available via the Rijksmuseum Collection API on May 4, 2017.

<sup>102</sup> Manovich, "Data Science and Digital Art History," 28–29.

classification system for cultural content” that can be used to index collections and texts.<sup>103</sup>

However, because of the limited number of Iconclass codes used, these were of little added value for the content analysis of the subset of Rijksmuseum paintings.

My exploration of the subset of Rijksmuseum data and images formed the basis for the visualizations presented on my project website [visualizingvisions.com](http://visualizingvisions.com). The website offers a storyline beginning with a painting of *Judith with the Head of Holofernes* (1500-1539) by (the circle of) Pordenone. This is one of the first examples of a painting on canvas rather than wooden panel included in the subset. Since the support material is part of the object metadata provided by the Rijksmuseum API, this aspect could be used to interactively visualize the materials on which was painted and the development over time. At the same time this visualization revealed that most of the paintings included in the subset date from around 1650.<sup>104</sup>

The oldest painting within the subset is a *Virgin and Child* created around 1300 by a follower of Duccio di Buoninsegna (ca. 1255/60-ca. 1318/19). Interestingly, this name occurred a second time within the subset, this time related to a nineteenth-century copy. This gave rise to a closer look at the respective artworks and to explain (forged) aging processes. Subsequently the recorded information regarding the birth and death locations of the associated painters (for approximately 1,450 of the 1,677 paintings) was used to visualize artist migrations. As might be expected from a museum that tells “the story of 800 years of Dutch history,” artists from the Netherlands are amply represented.<sup>105</sup>

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<sup>103</sup> <http://www.iconclass.org/> (accessed February 25, 2021).

<sup>104</sup> <http://visualizingvisions.com/> (accessed February 25, 2021). This website has gone live on July 5, 2017.

<sup>105</sup> <https://www.rijksmuseum.nl/en/about-us> (accessed February 25, 2021).

The storyline continues with an artwork by an unknown painter referred to as the Master of Alkmaar.<sup>106</sup> His work was the target of iconoclastic attacks as could be shown with an interactive slider. Lastly a word cloud was generated based on the (Dutch) words most used (with the exception of participles and the like) to describe the paintings included in the subset. Additional graphs, interactively related to the word cloud, show the number of artworks and artists over time, the surface areas of the paintings in square meters, and the variations in aspect ratios. A button labeled “extra” allows a sidebar to come into view, including footnotes, as it were, as well as links to additional information.

Exploring the Rijksmuseum dataset and visualizing the results in this manner was a useful experience. On the one hand, it enabled the engagement of a wider audience in both the contents of the subset and art historical knowledge. On the other hand, it provided mainly insight into the contents of the dataset rather than into art history in general. Existing knowledge could be tested to some extent, but it did not prove possible to ask and answer new art historical questions on the basis of the subset. In this case the result was thus not so relevant academically, but rather of value to popular science.

### Metropolitan Museum of Art

In early 2017, the Metropolitan Museum of Art, New York (NY), made its main spreadsheet accessible online.<sup>107</sup> By May 2017, this comma-separated values (CSV) file listed 454,084 objects that are part of the museum’s collection.<sup>108</sup> Because of the website

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<sup>106</sup> This was the subject of a previous study of mine as a student assistant within the Academy Assistants Project “Styles of Critique of Religion.” The result was published in Jansen, Oosthoek, and Terpstra, *Een Gebed Zonder Eind*, 19–21. See also [http://akademie-assistenten.ruhosting.nl/De\\_Zeven\\_Werken\\_van\\_Barmhartigheid](http://akademie-assistenten.ruhosting.nl/De_Zeven_Werken_van_Barmhartigheid) (accessed May 25, 2021).

<sup>107</sup> <https://github.com/metmuseum/openaccess/blob/master/MetObjects.csv> (accessed February 25, 2021).

<sup>108</sup> Based on the data available via the GitHub account of the Metropolitan Museum of Art on May 2, 2017.

visualizingvisions.com, contact was made by the Digital Department of the Metropolitan Museum of Art (The Met), with the question to consider doing a similar examination of The Met's Open Access collections.<sup>109</sup> Looking at the CSV file, however, it immediately became clear that this dataset imposed the same restrictions on art historical research as the Rijksmuseum dataset had done.

This observation is validated by other examinations such as “An Excavation of One of the World's Greatest Art Collections” (April 6, 2017) and “When Art Meets Big Data” (August 7, 2017), which are impressive from a computer science perspective, but offer limited art historical insights.<sup>110</sup> So instead of exploring the contents of the dataset as such, an alternative approach was sought and found in the form of one of The Met's period rooms.

A period room was thought to be of interest in this context because it represents a kind of mini dataset: elements of interior architecture combined with material objects, related in terms of place and time. The London *Dining Room from Lansdowne House* (1766-1769) designed by Robert Adam (1728-1792) served as the starting point. This period room includes the original immovable interior elements (e.g. flooring), but not the original moveable ones. Over time, such objects become scattered and difficult to retrieve. The Met, however, has an extensive collection of decorative arts and sculpture to fill such gaps.<sup>111</sup>

The Met's dataset was used to filter out the moveable objects that might be relevant for display in the *Dining Room from Lansdowne House*. First, a selection was made based on period. The period room dates from the 1760s, but objects may have been made and

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<sup>109</sup> Communication started on July 17, 2017.

<sup>110</sup> <https://fivethirtyeight.com/features/an-excavation-of-one-of-the-worlds-greatest-art-collections/>; <https://cloud.google.com/blog/products/gcp/when-art-meets-big-data-analyzing-200000-items-from-the-met-collection-in-bigquery> (both accessed February 25, 2021).

<sup>111</sup> <http://visualizingvisions.com/met/funnel/> (accessed February 25, 2021). This website has gone live on September 18, 2017.

acquired before and also after this period. The selection therefore ran from 1740 to 1800. Next, the place of origin of the objects was in focus. It is known that Robert Adam worked closely with leading artisans in London and the surrounding area, so a second filter limits the geographical range to Great Britain. Finally, care was taken to ensure that the resulting subset consisted only of interior objects.

In this manner, 1,724 objects from The Met's Open Access collections were identified as suitable candidates for exhibition in the *Dining Room from Lansdowne House*. The task of making a final selection is nevertheless a delicate one and requires experts like the curators of The Met. The interactive visualization that was created as a result of this exploration provides filtered access to the museum's collection to anyone who is interested.<sup>112</sup> However, the result is likely to appeal mainly to those interested in the interactive visualization, rather than the story behind it. The tool may nevertheless be used to search and explore a portion of the dataset, which itself lacks the level of detail necessary for art historical research.

### Lessons learned

These examinations of the existing datasets of the Rijksmuseum and The Met have made it abundantly clear that they reflect the content of the respective collections only in very general terms, and that they primarily provide insight into the datasets themselves. Both museums focus on a rough overview for a broad audience, and do not document, or barely document, the pictorial properties of individual objects in the subsets of their collections. Such sparse documentation makes it impossible to provide researchers "with ready-made

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<sup>112</sup> See "The whole is greater than the parts," halfway through the webpage <http://visualizingvisions.com/met/funnel/> (accessed May 25, 2021). Clicking on one of the dots redirects to the relevant object on the website of The Met, e.g. <https://www.metmuseum.org/art/collection/search/239151> (accessed May 25, 2021).

answers when they are asking new question” as Brandhorst put it. Therefore, no art historical questions concerning pictorial analysis could be answered.

Results were obtained only based on metadata such as support material and dating. However, this kind of data does not accurately represent the cultural phenomenon under study. It is true, in the words of Manovich, that software for data analysis and visualization helped to “notice the relations and patterns we did not see before” and thus to see the same data differently. But this is also its limiting factor: insights in the dataset do not equal art historical insights. This has led to the realization that instead of being broad and superficial, a constcamer dataset should be focused and comprehensive. In order to answer art historical research questions, the information needed to do so must be recorded in anticipation, and preferably also visually.

## Data management

The question of how art historical objects and images can be converted into concepts and terms that can be understood by today’s audience and, moreover, can be processed digitally, is one that was already being asked over fifty years ago.

One way to bring an ideal system down to reality is to ask ourselves three questions. Once the program for the system is outlined, who will make it, who will use it, and who will maintain it? [...] The second question, “Who will use the archive?,” is prompted by a slogan found on the walls of many computer centers. It reads, “Your formula for failure is to try to please everybody.”<sup>113</sup>

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<sup>113</sup> Lindsay, “Computer Input Form,” 21–22. For more recent approaches, see especially “Information: data, structure and meaning” (Part One) in Parry, *Museums in a Digital Age*, 10–115.

This slogan is consistent with the findings of the preliminary study. Thus, the purposes of this project will mainly be taken into account. Yet there are examples and best practices from which we can learn, and these will be discussed in this section, followed by an outline the database schema chosen for the constcamer dataset.

### Artworks as data

An online project that brings together and presents art historical data from numerous museum and other collections is the website [janbrueghel.net](http://janbrueghel.net). This website offers a complete catalogue of the works of Jan Brueghel I and includes two companion sites dedicated to Pieter Bruegel I (Jan I's father) and the Brueghel family.<sup>114</sup> Together they are "meant to provide ways of furthering our understanding of how the Brueg(h)el family produced a complex body of interconnected work."<sup>115</sup> The catalogue entries are sometimes accompanied by a discussion section that offers valuable insights into past and present scholarly debates. While tags are a means of roughly indicating what the artworks represent, image annotation is not the main concern of this particular website.

The Wikimedia Commons website, on the other hand, has implemented a different solution to annotating and referring to other Wikimedia image entries. Its online image of the constcamer painting *Cabinet of Art and Curiosities* (ca. 1620-1625) [Cat. No. 18], for example, is supplemented with several annotations that become visible when moving the mouse pointer over the image [Fig. 257].<sup>116</sup> These mouse-overs show either a text or an

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<sup>114</sup> <http://www.janbrueghel.net/> (accessed February 26, 2021).

<sup>115</sup> <http://pieterbruegel.net/>; <http://brueghelfamily.net/> (both accessed February 26, 2021).

<sup>116</sup> [https://commons.wikimedia.org/wiki/File:Frans\\_Francken\\_\(II\),\\_Kunst-\\_und\\_Raritätenkammer\\_\(1636\).jpg](https://commons.wikimedia.org/wiki/File:Frans_Francken_(II),_Kunst-_und_Raritätenkammer_(1636).jpg) (accessed February 26, 2021).

image, notably of the paintings represented in the constcamer, and clicking on one of these takes the user to the Wikimedia entry for that specific artwork.<sup>117</sup>

Wikimedia's annotations are an elegant solution, but the inclusion of text that can be entered freely results in descriptions such as “? *Mitra cardinalis*” and “probably some *Amphidromus*” regarding the seashells on display [Fig. 257]. From a computational point of view it would be desirable to structure such data by using controlled vocabularies, so that all depictions annotated with *Mitra cardinalis* are understood as the same type of seashell. When in doubt about what kind of seashell is represented, it would be more reasonable to simply annotate “seashell” instead of including a question mark in the annotation.

#### Getty Vocabularies

The Getty Vocabularies are usually at the basis of digital art history projects dealing with datasets.<sup>118</sup> These controlled vocabularies or ontologies are reference works that contain structured terminology for categorizing works of art and architecture in the Art & Architecture Thesaurus (AAT), their creators and current owners in the Union List of Artist Names (ULAN), and associated geographic names in the Getty Thesaurus of Geographic Names (TGN). These vocabularies have been in development since the late 1960s for museum cataloguing and information retrieval.<sup>119</sup> Their use guarantees that the terminology used is both understandable to humans and machine-readable. As is best practice, this project makes use of the Getty Vocabularies.

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<sup>117</sup> One of the small portraits on the left, for example, links to Peter Paul Rubens' *Abraham Ortelius* (1633) [Fig. 188], available at [https://commons.wikimedia.org/wiki/File:Abraham\\_Ortelius\\_by\\_Peter\\_Paul\\_Rubens.jpg](https://commons.wikimedia.org/wiki/File:Abraham_Ortelius_by_Peter_Paul_Rubens.jpg) (accessed February 26, 2021).

<sup>118</sup> Zorich, “Transitioning to a Digital World”; Harpring, *Introduction to Controlled Vocabularies*.

<sup>119</sup> Brown, *The Routledge Companion*, 440.

## Database schema

Data can be collected and stored in a database management system, usually a relational database. Such a database consists of tables with columns to store information. Each row in the table is called a record and each field a value. It is common to give records a unique key, often an incrementing number, and to use this key to create relations with other records in the same or other tables, which makes it easier to reason and work with the data and to avoid duplicate information. It is best practice to give tables and columns descriptive names, and to define precisely what kind of data, such as text, a date or a number, can be entered into a field. Additionally, each table ideally holds all and only the information relevant to a certain type of object or entity. This blueprint of the database is called a schema.<sup>120</sup>

The nature of cultural heritage information makes it hard to design a schema. The variety of objects and entities represented in a collection make it difficult to create predefined tables and columns. During data entry new types of objects and entities are often discovered, which means the schema will be under continuous development and the number of tables and columns can become increasingly unmanageable. This issue can be prevented by using an open schema based on the entity-attribute-value (EAV) model, where the structure of the data is not reflected by the schema but is entered into generically named tables and columns, resulting in a technically challenging but flexible solution.<sup>121</sup> The constcamer dataset uses a schema inspired by the EAV model, as will be discussed in the next section.

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<sup>120</sup> For more information, see for example <https://database.guide/what-is-a-database-schema/> (accessed March 1, 2021).

<sup>121</sup> For an in-depth discussion of the EAV model, see for example <https://inviga.com/blog/understanding-eav-data-model-and-when-use-it> (accessed March 1, 2021).

## Creating the constcamer dataset

The abundance of subjects and objects depicted in constcamer paintings, as well as associated metadata, can be effectively collected and stored in a relational database management system. This project makes use of a no-code development platform (NCDP), which is database management software with a graphical user interface.<sup>122</sup> The application used is Ninox, because it runs on Mac computers, is reasonably priced, allows some data analysis, can export data, is simple to use, and offers good documentation and support.<sup>123</sup> The graphical user interface of Ninox facilitates the design of input forms based on a database schema, in this case inspired by the entity-attribute-value model.

Annotating paintings is a complex task and involves collecting metadata, then breaking down the pictorial content of the images into thematic and iconographic elements. Conceptually, the constcamer dataset consists of “entities” and “links”: an entity can be connected to another entity through such a link. For example, the constcamer painting entitled *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84] is an entity. Another entity is the painting’s maker, the person Jan Brueghel II (Jan I’s son). These two entities are connected to each other by means of the link type “creator.” In this way it is documented that the *Allegory of Sight* was created by Jan Brueghel II, the Flemish painter and draftsman who lived from 1601 to 1678.<sup>124</sup>

This approach results in three tables; a first one that lists all entities [Fig. 301], a second one that lists all links [Fig. 302], and a third one that lists all recorded relationships between entities, also called entity-to-entity or E2E [Fig. 303]. Currently, the dataset holds

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<sup>122</sup> For a brief overview of NCDPs, see <https://www.g2.com/categories/no-code-development-platforms> (accessed February 26, 2021).

<sup>123</sup> <https://ninox.com/en> (accessed March 1, 2021).

<sup>124</sup> <http://vocab.getty.edu/page/ulan/500013747> (accessed March 1, 2021).

161 constcamer paintings in the form of images and associated information. These give rise to approximately 3,400 entities that are connected to each other via thirteen link types. In total about 12,800 connections between these entities have been recorded. Nevertheless, it should be noted from the outset that this result is an approximation and makes no claim to completeness, either in terms of the number of constcamer paintings preserved or in terms of the annotations used to describe these works. This section describes the practicalities of the creation of the constcamer dataset.

### Entities

Each entity has been assigned a title and a type, in order to be able to distinguish the different entities from each other. The types currently available in the constcamer dataset

[Fig. 304] are:

- animal,
- architecture,
- constcamer,
- furnishing,
- graphics,
- location,
- material,
- museum or collection,
- object,
- painting,
- person,
- plant,
- scene,
- sculpture,
- subject, and
- theme.<sup>125</sup>

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<sup>125</sup> If the need arises, existing types can be edited, or new ones can be added.

In addition, if available, a semantic Uniform Resource Locator (URL) or web address has been added as well. The Getty Vocabularies, among others, provide such links. It is useful to refer, for example, to Jan Brueghel II's record in the Getty's ULAN because his name can be written in many ways but, with the ULAN, it is exactly clear which artist is meant [Fig. 304].

The Getty's webpage on the person Jan Brueghel II includes a variety of spellings and additional information, such as nationalities, roles, gender, birth and death places, related people or corporate bodies, and sources and contributors.<sup>126</sup> The semantic URL refers to a Linked Open Data (LOD) format that, if desired, can be accessed and used to extract information on the vocabulary entries. Whenever an artist is missing from the Getty's ULAN, the online resource "RKD Explore" by the Netherlands Institute for Art History (RKD) is used as the authority instead. Extensive information about Jan Brueghel II can also be found in their sub-database RKDartists, as well as a permalink to this record.<sup>127</sup> Instead of denominations such as "the Elder" and "the Younger," the convention is used to indicate family lineages with "I," "II" and "III" [e.g. Figs. 263 and 273].

The descriptive titles of the entities often reflect the titles or names given to things in the literature or in the Getty vocabularies and other databases consulted. Concerning the constcamer paintings themselves, a number of these have their own records in the sub-database RKDimages to which will be referred. This is the case, for example, for the aforementioned *Allegory of Sight* [Cat. No. 84].<sup>128</sup> The same is true for some of the paintings depicted in them, such as *Christ's Charge to Peter*.<sup>129</sup> In addition, persistent URLs offered by digitized museum collections are added as semantic links to the entities in the constcamer

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<sup>126</sup> <http://vocab.getty.edu/page/ulan/500013747> (accessed March 1, 2021).

<sup>127</sup> <https://rkd.nl/explore/artists/13289> (accessed March 1, 2021).

<sup>128</sup> <https://rkd.nl/explore/images/42695> (accessed March 1, 2021).

<sup>129</sup> <https://rkd.nl/explore/images/265974> (accessed March 1, 2021).

dataset. This is for example the case for the *Cabinet of Art and Curiosities* [Cat. No. 18], currently owned by the Kunsthistorisches Museum of Vienna, Austria.<sup>130</sup>

The entity type museum or collection is usually accompanied by a semantic URL to the Getty's ULAN,<sup>131</sup> while the entity type location typically refers to the Getty's TGN.<sup>132</sup> The latter is of additional relevance, since TGN records offer latitude and longitude coordinates that can be used to plot such geographic information on a map. The other entity types are mostly accompanied by semantic URLs to the Getty's AAT. Just like with the artist names, this is a measure to counteract ambiguity. For example, an explanation of the object globe is given in the AAT and indicates that by this term is meant a cartographic sphere, described as a representation "of the Earth, heavens, or another planet in the form of a ball."<sup>133</sup>

#### Entity properties

In addition to the main input form (title, optional semantic URL, and type), a second form has been added in which the properties of an entity can be noted [Figs. 305 and 306]. The available fields of this form are the following. The "dating lower limit" and "dating upper limit" allows the input of a date range.<sup>134</sup> The "height in cm" and "width in cm" indicate the dimensions of the entity in centimeters. The "number of paintings" and "number of persons" relate exclusively to the paintings and persons depicted in constcamer paintings. The "format," "state," and "culture" of the entity relate specifically to (constcamer) paintings.

The formats to choose from are:

- landscape,

<sup>130</sup> <http://www.khm.at/de/object/912d2b1c7b/> (accessed March 1, 2021).

<sup>131</sup> For the Kunsthistorisches Museum of Vienna, see <http://vocab.getty.edu/page/ulan/500312519> (accessed March 1, 2021).

<sup>132</sup> For Vienna, see <http://vocab.getty.edu/page/tgn/7003321> (accessed March 1, 2021).

<sup>133</sup> <http://vocab.getty.edu/page/aat/300028089> (accessed March 1, 2021).

<sup>134</sup> When a precise date is known (e.g. 1630), then both fields are filled with the same year.

- portrait,
- ellipse (including a round format),
- polygon,
- triptych, and
- unknown.

The statuses to choose from are finished, unfinished, and unknown. Lastly, the culture allows to indicate the origins of the entity divided roughly into northern Europe, southern Europe, and unknown.

The “image” field makes it possible to add an image of the entity. Below the “path to image” enables the retrieval of this image after data export. If an image is added to the entity, the field “image credit” is also filled in. Notes for personal use are made in a free text field. Solely with respect to constcamer paintings, the “Cat. No.” field is filled in with a unique number. The “bibliography” and “signed/dated” fields are also exclusively related to constcamer paintings and completed only if such information is available. The “URL” field contains web addresses that are not persistent and are therefore accompanied by a “date accessed” field. Finally, the button labeled “disabled” allows for the exclusion of certain entities that in hindsight are not considered to be constcamer paintings, without having to remove them manually.<sup>135</sup>

### Typology

In the dataset, each constcamer painting has been assigned the type of “constcamer.” For this type of entity, the main input form and entity properties input form are filled out most extensively [Figs. 305 and 306]. Because of the amount of research that has already been

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<sup>135</sup> In this manner seven entities were disabled (see chapter 9), six of which are included in Appendix B [Figs. 64, 72, 74, 75, 274 and 275]. An image of the seventh entity, an allegory of sight, is available via <http://www.sothebys.com/en/auctions/ecatalogue/2002/old-master-paintings-part-two-l02112/lot.115.html> (accessed June 24, 2021).

done on the paintings depicted in constcamer paintings, they are also described more extensively than other types of entity. Each painting that could be discerned in the constcamer paintings is considered to be a separate entity. As a result, about 2,600 entities of the approximately 3,400 entities (ca. three-quarters) in the constcamer dataset are of the type painting. This also results in entities with descriptive titles such as *Back of a Painting* and *Part of a Painting*, of which no subject matter could be determined.

On the other hand, entities of the “object” type (such as the globe) represent a kind of object, rather than referring to a specific example (such as the *Terrestrial Table Globe* by Mercator).<sup>136</sup> There are exceptions to this rule, such as the entity *Compendium by Gillis Coignet*, in which case the exact object depicted was identified. Nevertheless, the vast majority identify a kind of object, and the same applies to the entity types animal, architecture, furnishing, graphics, material, object, plant, scene (only to some extent), sculpture, subject, and theme. The entities of the “graphics” type require some further clarification. Graphics are understood to include:

- prints,
- drawings,
- sketches,
- playing cards,
- musical scores,
- diagrams, and
- letters,

because distinctions between such works rendered in paint are often difficult to make.

The persons included in the entities table are again specific individuals, mainly creators of works of art, although persons otherwise related to constcamer paintings are

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<sup>136</sup> For the specific globe by Mercator, see <https://collections.rmg.co.uk/collections/objects/19783.html> (accessed March 2, 2021).

sometimes also listed (e.g. Rembert Dodoens). The “location” and “museum or collection” types equally refer to unique places and institutes.

## Links

In addition to the entities table [Fig. 301], the constcamer dataset is provided with a links table [Fig. 302] to define the relationship between two entities [Fig. 303]. Each link has been assigned a title and, if available, a semantic URL that describes the link. The semantic URLs are primarily taken from the Schema.org vocabulary. Schema.org offers a schema to describe a “VisualArtwork.”<sup>137</sup> In addition, the Conceptual Reference Model (CRM) of the International Committee for Documentation (CIDOC), part of the International Council of Museums (ICOM), is used.<sup>138</sup> The CIDOC CRM targets the field of cultural heritage in its broadest sense and forms the basis of the more specialized Linked Art Data Model, which is focused on artworks and art museums and incorporates the Getty Vocabularies as well.<sup>139</sup>

The advantage of adding a semantic URL to describe the meaning of the link is again that ambiguity can be avoided. Currently, thirteen different links [Fig. 302] are in use:

- creator,
- possible creator (in cases of uncertain attributions, including “in the style of”),
- contributor (in case of collectively created constcamer paintings),
- location created (related to constcamer paintings),
- current location,
- current owner,
- medium,
- surface,
- depicts,
- about (referring to a subject or theme),
- features are also found on (in case of similar constcamer paintings),

<sup>137</sup> <https://schema.org/VisualArtwork> (accessed March 2, 2021).

<sup>138</sup> <http://www.cidoc-crm.org/> (accessed March 2, 2021).

<sup>139</sup> <https://linked.art/model/> (accessed March 2, 2021).

- has copy (in case of identical constcamer paintings), and
- is based on (referring to resources such as Ovid's *Metamorphoses*).

By means of these links two entities are connected to each other.

#### Annotation workflow

Based on the entities table and the links table, the entity-to-entity or E2E table can be filled.

The process will be clarified using the example of *Apelles Painting Campaspe* [Cat. No. 8].

This constcamer painting forms the starting point and functions conceptually as the parent, to which children can be related [Fig. 307]. So to the entity *Apelles Painting Campaspe* (parent) the entity globe (child) is added by means of the link depicts [Fig. 308]. The input form allows to choose a link from the links table [Fig. 309], and a child from the entities table [Fig. 310]. In the case of a depicts link, an image can be added to the form, accompanied by a path to image to enable the retrieval of the image after data export [Fig. 308].

In the same manner, it is documented that *Apelles Painting Campaspe* (entity: constcamer) has a creator (link) in the person of Willem van Haecht II (entity: person). Its location created (link) is Antwerp (entity: location), while its current location (link) is The Hague (entity: location), where the constcamer painting is preserved by its current owner (link) the Mauritshuis (entity: museum or collection). The medium (link) of oil paint (entity: material) is applied to the surface (link) in the form of a panel (entity: material).

The constcamer painting depicts (link) numerous entities of different types, such as the globe (entity: object) and the *Game Larder Still Life* [...] (entity: painting). In turn, this painting is provided with information about its properties [Fig. 311], child entities [Fig. 312], and several parent entities, since the painting reappears in three other constcamer paintings [Fig. 313]. The *Game Larder Still Life* is about (link) a still life (entity: subject), while the main

theme of Apelles Painting Campaspe, as indicated by the title, is about (link) an allegorical representation (entity: theme). Apelles Painting Campaspe is based on (link) Pliny's Natural History (entity: subject), whereas its features are also found on (link) another constcamer painting, namely the *Collection of Cornelis de Geest with Paracelsus* [Cat. No. 15].

In addition, more general entities were introduced to refer to groups of entity types. The entity person of the type person, for example, is used to indicate if persons are depicted at all in constcamer paintings. In addition, entities that refer to groups of entity types are:

- animal,
- material,
- measuring device (as discussed in chapter 13),
- musical instrument,
- optical instrument (as discussed in chapter 13),
- plant
- sculpture, and
- timepiece (a type of measuring device).

Generally, these entities refer to things depicted as part of the collection. For example, plants in the form of flowers or fruit can be displayed lying on the ground, as seen in the constcamer painting *Art Lovers in an Art Gallery* [Cat. No. 114]. On the right, however, the room opens up to a landscape with trees. This part of the painting is annotated as a vista (entity: scene). Since the trees, as well as the birds for that matter, are part of the vista, they are not specifically labelled.

As the example of the *Art Lovers in an Art Gallery* [Cat. No. 114] illustrates, the entities in the constcamer dataset are only annotated to a certain level of detail. This choice stems from the objective of making the represented collections intelligible, on the one hand, and the imposed time constraints due to the manual work required, on the other. Just like the example of the plants and animals depicted in the vista [Cat. No. 114], entities represented in the paintings depicted in constcamer paintings remain undocumented. The

content of these paintings is accessible through their respective titles and the subjects linked to them, if these could be identified. The entities of the “subject” type consist of the various painterly genres that were in circulation at the time:

- allegory,
- animal painting,
- battle,
- Christian iconography,
- classical mythology and ancient history,
- exterior view,
- figures,
- genre scene,
- iconoclasm,
- interior view,
- landscape,
- portrait,
- seascape,
- still life,
- study, and
- townscape.

To this was added “*brandeken*” (see chapter 10) to distinguish certain paintings annotated as being about a landscape or townscape, as well as “flower piece” (see chapter 9) to specify certain paintings annotated as being about a still life.

The entity type “scene” was introduced to annotate other pictorial units such as the vista. Some scenes, the Landscape with Iconoclastic Donkeys in *An Art Gallery* [Cat. No. 13], for example, are something in between a vista and a painting. The same is true for the townscapes of Antwerp and Rome, as well as the Palace of Coudenberg in Brussels and the Castle of Mariemont in Mariemont [Appendix D.13]. Other scenes are something of a vision or ensemble represented within the collection rooms, such as the Angels Making Music in *Christ in the Studio (Pictura Sacra)* [Cat. No. 37] and the proverb *Sine Cerere et Baccho Friget*

*Venus* (as discussed in chapter 13). Only in a few exceptional cases such scenes are annotated in more detail.

The degree of specificity of the entities included in the constcamer dataset depends on the research questions intended to be answered. For example, the specified entities of the “material” type (link: depicts) are limited to coral, seashell, and shark tooth. In the same vein, the object “globe” was not further specified into a celestial or terrestrial globe, because in many cases the difference was indiscernible and, moreover, this particular information was irrelevant to this study. During the annotation process, such choices were continually made, and previous choices revisited. Although the outlined approach might initially give the appearance of objectivity, the resulting dataset inevitably reflects personal choices and preferences. The same applies to the constcamer paintings that are part of it, as will be discussed next (and in chapter 9).

#### Collecting images of constcamer paintings

Essential for inclusion in the constcamer dataset is the availability of images of the constcamer paintings in question. The starting point for assembly was Speth-Holterhoff’s book, which mentions approximately ninety constcamer paintings and illustrates fifty-eight of them (see chapter 2).<sup>140</sup> In addition, RKDimages was searched resulting in about ninety constcamer entries, which partially overlap with those sourced by Speth-Holterhoff.<sup>141</sup> The RKDimages entries sometimes have the additional benefit of provenance information, including auction results.<sup>142</sup> Nowadays, auction houses publish their auction results of about

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<sup>140</sup> Speth-Holterhoff, *Les Peintres Flamands*.

<sup>141</sup> <https://rkd.nl/nl/explore/images> (accessed March 3, 2021).

<sup>142</sup> See for example Cat. No. 77 via <https://rkd.nl/explore/images/214115> (accessed March 3, 2021).

the last twenty years online, which often means that digital images can be found on their webpages as well.<sup>143</sup>

Subsequently other literature, such as Scarpa Sonino's *catalogue raisonné* (see chapter 2), and online resources were used to collect and find images. These online resources include digitized museum collections, Wikimedia, Web Gallery of Art, Getty Images, Pinterest, Flickr, Twitter, blogs, janbrueghel.net and auction results predominantly from the following auction houses: Sotheby's, Christie's, Artnet, De Jonckheere, Dorotheum, and Hampel Fine Art Auctions. A number of museums was contacted, which sometimes led to access to better imagery.<sup>144</sup> Museum visits, moreover, have also helped to identify a constcamer painting [Cat. No. 158] not previously considered part of the genre.

Since digital images are needed for processing, those of best quality were chosen when images of the same constcamer painting were offered by different resources. If no digital equivalent of a constcamer painting mentioned in the literature could be found, or if the digital equivalent was of inferior quality, the images available through these publications were scanned. In the event that RKDimages offered the highest resolution image, then this one was chosen despite the fact that it comes with an overlay [e.g. Cat. No. 140]. This overlay does not obscure the pictorial content of the image. In a number of cases, a black and white image had to suffice [e.g. Cat. No. 140].

Not all of the constcamer paintings mentioned by Speth-Holterhoff could be traced. The *Cabinet d'Amateur* from the (1957) collection of R. Tayemans in Brussels, for example,

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<sup>143</sup> See for example Cat. No. 77 via <http://www.sothebys.com/en/auctions/ecatalogue/2011/old-master-british-paintings-evening-l11033/lot.19.html> (accessed March 3, 2021).

<sup>144</sup> I am extremely grateful to the museums that have helped me in this way, especially the Courtauld Institute of Art (London), Mauritshuis (The Hague), Musée des Beaux-Arts (Dijon), Musée Magnin (Dijon), Musei Reali Torino (Turin), Museo d'Arte Antica e Pinacoteca del Castello (Milan), National Galleries of Scotland (Edinburgh), Palacio de Liria (Madrid), Royal Collection Trust (London), Royal Museum of Fine Arts (Brussels), Rubenshuis (Antwerp), Staatliche Kunsthalle (Karlsruhe), Philadelphia Museum of Art (Philadelphia), and The Walters Art Museum (Baltimore).

described as similar to *An Antique Dealer's Gallery* [Cat. No. 101].<sup>145</sup> Not all of the seventeenth-century constcamer paintings mentioned by Scarpa Sonino could be identified either.<sup>146</sup> In addition, Baadj mentions an *Allegory of Europe Set in a Kunstammer* (1670) by Jan van Kessel I, of which it was not yet possible to find an image.<sup>147</sup> Continued efforts will undoubtedly bring additional (images of) constcamer paintings to light.

While constcamer paintings in private collections could not be viewed in person, some of those currently owned by museums could. Partly in advance but mostly during this project, visits were made to twenty-three constcamer paintings [Cat. Nos. 4, 5, 6, 8, 9, 13, 17, 18, 40, 42, 43, 53, 67, 68, 83, 101, 109, 131, 134, 135, 136, 141, and 158]. As a visitor in the respective museums, without special privileges (except at the Musée Magnin in Dijon and the National Gallery in London), the paintings could be studied but not from too close a distance. Taking detail photos was of great benefit in these circumstances. Just as with the digital images that were collected, through these photos some details could be discerned that were not visible to the naked eye. Examples include inscriptions on books and pictures-

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<sup>145</sup> Speth-Holterhoff, *Les Peintres Flamands*, 74. Other examples are the following. To start with those related to Frans Francken II, on page 86: the *Cabinet d'Amateur* described as similar to Cat. No. 31, perhaps referring to Cat. No. 35 (see also the description of the Hallwyl Museum via Cat. No. 31, which mentions an *Allegory of Painting*, Berlin, signed 1636). On page 90 (note 109 on page 210): a constcamer painting from the (1957) Gargam collection, Paris, described as similar to Cat. Nos. 100, 105, and 117. On page 94: a constcamer painting with harpsichord belonging to Major J.R. Warde, Squerreyes Court, Westerham (Kent). On page 95: the *Cabinet d'Amateur* described as similar to Cat. No. 123; a constcamer painting from the (1957) collection of T. Hennard, Brussels; a constcamer painting from the (1957) collection of V.M. Sabin, London, described as similar to Cat. No. 13; and an *Atelier d'Apelle*. On page 96: an *Intérieur de Galerie* signed and dated 1612, perhaps referring to Cat. No. 25; an *Intérieur de Galerie* signed and dated 1636, perhaps referring to Cat. No. 35. Related to Frans Francken III, on page 96: the *Une Galerie de Tableaux dans la Maison de Rubens* signed "P. Neefs"; and its copy. Related to Hans Jordaens III, on page 113: copies after the *Five Senses* series [Cat. Nos. 17, 134, 135, and 136] (see chapter 10). Related to Gillis van Tilborgh II, on page 161: the *Cabinet d'Amateur* formerly in the collection of Sir Francis Cook, Richmond. On page 164: the *Cabinet d'Amateur* from the (1957) collection of J. Hauseux, Brussels.

<sup>146</sup> The first is a constcamer painting associated with Frans Francken II (page 50, no. 10): sold by Christie's London, on June 29, 1923, lot. no. 121. The second one is associated with David Teniers II (page 82, no. 13): oil on canvas, 97 x 124.5 cm, sold by Sotheby's New York, on March 6, 1975. Scarpa Sonino, *Cabinet d'Amateur*, 1992, 50 & 82.

<sup>147</sup> Oil on copper, 49.5 x 68.6 cm, sold by Sotheby's New York, Important Old Master Paintings, on January 30, 1997, lot. no. 16. Baadj, *Jan van Kessel I*, 2016, 125 (note 273).

within-pictures [e.g. Figs. 226, 269, 270, 291, 294, 295, and 296], which will be discussed in chapter 10. Overall, images of constcamer paintings made it possible not only to look at, but also to better see the pictorial content of the artworks.

## Looking, seeing, understanding

Annotating or adding information about what is represented in constcamer paintings poses a great challenge, mainly because of our distance in time. Consequently, it can be very difficult to establish what you “see” when you do not know exactly what you are looking at. This difference between looking and seeing was already noted by Ludwik Fleck (1896–1961) in his 1947 paper on the philosophy of science entitled “To Look, to See, to Know.”<sup>148</sup> In short, “Fleck distinguishes between ‘looking’ and ‘seeing’ – the former referring to the physiological process of visual perception, the latter to the cognitive aspect of identifying what someone is looking at.”<sup>149</sup> Contextual knowledge is often necessary in order to be able to see, or as Fleck argued, “*To see, one has first to know.*”<sup>150</sup>

Fleck’s view is not that different from the theories of knowledge that prevailed in previous centuries, which can be traced all the way back to classical antiquity (see chapter 4). Interestingly, the problem of seeing shapes or forms was illustrated by Fleck with the example of letters of the alphabet.<sup>151</sup> The understanding of the visual experience was also given much thought in the Renaissance. Written text is something to be seen, just like a picture, and both text and image were conceived as part of visual culture. Moreover,

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<sup>148</sup> Fleck, “To Look.” My thanks go to Pia Bornus and Volker Remmert for bringing this text to my attention.

<sup>149</sup> Boon et al., “A Symposium on Histories of Use and Tacit Skills,” n.p.

<sup>150</sup> Fleck, “To Look,” 134.

<sup>151</sup> Fleck, 131.

according to Leonardo da Vinci (1452–1519), paintings give “unmediated access to nature that words cannot give,” and painting thus constitutes a kind of universal language that can replace the written word.<sup>152</sup> The concern with “how to adjust words to things, or *verba* to *res*” remained prominent well into the seventeenth century.<sup>153</sup>

One of the reasons for the fascination with words and things (including images) at that time was the exploration of the New World and the discoveries this led to. Since there were no antique sources describing the novelties that were being found, there were no textual authorities to verify such findings.<sup>154</sup> Another reason was the “rise of the vernaculars” in an age of “inventorying and categorizing” the visible world, which often meant that words did not yet exist and had to be invented.<sup>155</sup> The complexity of the pictorial sign, however, is that the meaning it signifies is not fixed and depends on historical and sociocultural factors.<sup>156</sup>

As a result, the meaning of the constcamer with its many representations has been lost to some extent to modern viewers, while the image has survived. This demonstrates that the transfer of images as a universal language without contextual information does not stand the test of time. In concrete terms this means that only part of the iconographic significance of the constcamer can be deduced from its images. The remainder requires the study of diverse sources to penetrate the intellectual mindset of the period in which they were created. Ultimately, the findings based on looking and seeing could be documented in my dataset, but not the why or the processes of determining meaning.<sup>157</sup> “Computing, in

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<sup>152</sup> Smith, *The Body of the Artisan*, 92; Summers, *The Judgment of Sense*, 137–39.

<sup>153</sup> Weststeijn, “From Hieroglyphs,” 239.

<sup>154</sup> Smith, *The Body of the Artisan*, 42.

<sup>155</sup> Weststeijn, “From Hieroglyphs,” 269.

<sup>156</sup> Cohen, Schnelle, and Fleck, *Cognition and Fact*, xi–xii.

<sup>157</sup> This corresponds to what in iconology is called documentary meaning, or connotation in semiotics (see note 95).

other words, is not a substitute for understanding,” and interpretation is inextricably linked to additional art historical research.<sup>158</sup>

#### Categorization and identification

*The Order of Things* by Michel Foucault (1926–1984) has been studied extensively in relation to museums and collections, but less so in connection with constcamer paintings or pictures of collections.<sup>159</sup> Foucault’s form of historical awareness is useful when dealing with such images. On systems of categorization, he famously quotes

a “certain Chinese encyclopedia” in which it is written that “animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) suckling pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a very fine camel-hair brush, (l) *et cetera*, (m) having just broken the water pitcher, (n) that from a long way off look like flies.” In the wonderment of this taxonomy, the thing that we apprehend in one great leap, the thing that, by means of this fable, is demonstrated as the charm of another system of thought, is the limitation of our own, the stark impossibility of thinking *that*.<sup>160</sup>

By replacing the example of a “Chinese encyclopedia” with a “constcamer painting” in which a multitude of representations have been brought together, it becomes clear that here too another system of thought applies.

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<sup>158</sup> Zimmermann, *Hermeneutics*, 71.

<sup>159</sup> Most notably in Hooper-Greenhill, *Museums*.

<sup>160</sup> Foucault, *The Order of Things*, xv; Hooper-Greenhill, *Museums*, 4.

For example, fossilized shark teeth [Appendix D.7] were found on beaches and thought, in the seventeenth century, to be fish tongues or “tongue stones” [Fig. 81]. They were categorized and depicted between other “stony” objects such as seashells and coral that were the subject of contemporary debates on petrification [Fig. 257].<sup>161</sup> Another example is the display of musical instruments together with clocks – the latter being considered today purely as mechanical devices for timekeeping, but which were then treated like trumpets and violas, associated with the greater theory of universal harmony (see chapter 11). The writing of history, however, does require the “translation of past concepts and terms into ones that can be comprehended by modern-day audiences.”<sup>162</sup> This holds true for both categorization and identification.

*Naturalia, artificialia, et cetera*

To start with categorization, early modern collections could be categorized in all kinds of ways.<sup>163</sup> Common denominators that have been handed down include *naturalia* for objects made by nature and *artificialia* for objects made by humans. At the court of Emperor Rudolf II, *scientifica* was added to these two, as will be discussed in chapter 13.<sup>164</sup> In other cases the third category added was *antiquitas* or *antiquitates*, referring to history in general or Roman antiquity in particular.<sup>165</sup> Some authors make a further subdivision into *naturalia*, *artificialia*,

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<sup>161</sup> The Francken collection included “a box with shells turned into stone,” as described in the inventory of 1617. Duverger, *Antwerpse Kunstinventarissen*, 1:393; Rijks, “Catalysts of Knowledge,” 179 & 222–30. According to Rijks, it seemed impossible to categorize coral at the time, because it was not known how it came into existence. Several suggestions circulated (such as plant, stone, or animal), but no consensus was reached. See Rijks, “Unusual Excrescences of Nature,” 140.

<sup>162</sup> Mosley, “Sundials and Other Cosmographical Instruments,” 80.

<sup>163</sup> On the differences between categorization and classification, see especially Jacob, “Classification and Categorization,” 527–31.

<sup>164</sup> E.g. Bredekamp, *Antikensehnsucht und Maschinenglauben*, 63.

<sup>165</sup> E.g. Scheller, “Rembrandt en de Encyclopedische Kunstkamer,” 105 & passim.

*antiquitas, historia, and artes*.<sup>166</sup> However, these categories overlap and their application could vary, both in the early modern period and today.<sup>167</sup> Since it is not known what terms, if any, were used in the local context of Antwerp and Brussels, this project employs a modern typology as described above.

#### The object sector

In the same vein, modern terms are used to transform constcamers and other images into data. The constcamer painting *Allegory of Sight* [Cat. No. 84], for example, depicts among other things the object “sector” [Fig. 132]. This term can mean different things, and therefore reference is made to a specific Getty AAT record that describes sectors as “proportional measuring gauges consisting of two straight, metal bars hinged at one end and graduated for measuring; used in clockmaking.”<sup>168</sup> By the end of the sixteenth century, the period of its invention, the main use of the sector was to solve mathematical problems, and the design of the instrument was continuously improved upon – but this aspect is not captured by the Getty Vocabularies.

Additionally, the list of terms in other languages provided by Getty’s AAT is far from comprehensive. The sector is referred to in Dutch as the *proportionalpasser*, in French as the *compas de proportion*, in German as the *Proportionalzirkel*, and in Italian as the *compasso di proporzione*. The proportional compass, however, is known in Dutch as the *reductiepasser*, in French as the *compas de réduction*, in German as the *Reduktionszirkel*, and in Italian as the *compasso di riduzione*.<sup>169</sup> To complicate matters even further, each

<sup>166</sup> E.g. Briels, “Amator Pictoriae Artis,” 151–52.

<sup>167</sup> Lugli, *Naturalia et Mirabilia*, 98.

<sup>168</sup> <http://vocab.getty.edu/page/aat/300201680> (accessed March 4, 2021).

<sup>169</sup> Meskens, “Michiel Coignet’s Contribution,” 143. See also <http://vocab.getty.edu/page/aat/300022492>; <https://catalogo.museogalileo.it/approfondimento/Compasso.html> (both accessed September 28, 2020).

inventor who developed a variation on the sector, around the year 1600 that is, also gave their invention a new name. Thomas Hood (ca. 1556–1620) was the first to call his instrument a sector [Fig. 135], inspired by Euclid’s *Elements*, while Michiel Coignet (1549–1623) speaks of his *pantomètre* [Fig. 137], and Muzio Oddi (1569–1639) of his *compasso polimetro*.<sup>170</sup>

Nevertheless, the entity “sector” provides a basis for mapping and comparing all instances of representations of this type in constcamer paintings [Appendix D.10]. The clearly distinguishable variants (gunner’s quadrant, Hood’s sector, and Mordente compass) are indicated by their respective names in the constcamer dataset (see chapter 13). As the example of the sector demonstrates, the relationship between words and things, *verba* and *res*, was and is not stable and unambiguous.<sup>171</sup> Furthermore, purely on the basis of the images of constcamers, our main resource, it cannot be deduced what kind of language was involved at the time. It would thus be counterproductive, if not downright unworkable, to hold on to historical categories and terminology.<sup>172</sup>

### Interpretation

The annotations recorded in the constcamer dataset need interpretation to make them understandable. Interpretation or hermeneutics is the “art of understanding.”<sup>173</sup> Aristotle wrote the oldest preserved treatise on hermeneutics, understood as the expression of mental ideas in human language.<sup>174</sup> Interpretation is thus conceived as a “method of using

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<sup>170</sup> Bud and Warner, *Instruments of Science*, 527; Camerota, *The Geometric and Military Compass*, 62.

<sup>171</sup> Gian Maria Tore speaks of the “*illusion du mot littéral, normal, naturel*” in this regard. Tore, “L’Énonciation,” n.p.

<sup>172</sup> Mosley, “Sundials and Other Cosmographical Instruments,” 80.

<sup>173</sup> Zimmermann, *Hermeneutics*, 2.

<sup>174</sup> Zimmermann, 3.

signs to reveal a hidden reality,” in other words of accessing mental ideas through human language.<sup>175</sup> This language can be expressed not only by words but also by things, such as paintings that were characterized by Leonardo as constituting a kind of universal language. Art, poetry, and rhetoric were seen as carriers of knowledge well into the seventeenth century, because human *verba* (*logoi* in ancient Greek) and *res* (especially images) were considered necessary to think and share in universal reason (*Logos*).<sup>176</sup>

#### The pictorial context

The sector is just one small representation of about 3.8 by 3.6 centimeters amid many others in the *Allegory of Sight* [Fig. 258]. Each of the represented objects, animals, plants, people, and interior and exterior elements have stories of their own. In order to determine meaning our view needs to be broadened and take into account these painted surroundings, and thus the realistic and allegorical qualities of a constcamer painting such as the *Allegory of Sight* [Cat. No. 84]. Its overall theme is the sense of sight, the most important of the five classical senses (i.e. sight, hearing, taste, touch, and smell).<sup>177</sup> The inclusion of a sector in this painting [Fig. 258] suggests a symbolic significance of the instrument as an aid to vision or a tool to improve sight. This is only one aspect of meaning-making, however, and more angles for interpreting the sector will be discussed in chapter 13.

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<sup>175</sup> Jaroszynski, *Science in Culture*, 64.

<sup>176</sup> Zimmermann, *Hermeneutics*, 6 & 19–20.

<sup>177</sup> Peterson, “The Five Senses,” 105–9.

## Summary and implications

Constcamer paintings are rich and varied images whose content can be “re-viewed” by taking advantage of the opportunities that a dataset offers. While the dataset is an integral part of digital art history, the pictorial analysis and annotation of images is currently an underrepresented area of work in this field. One of the main reasons for this is that a transformation is needed to turn artworks into representative digital equivalents. A further difficulty is that images from bygone eras reflect systems of thought that are different from our own. The ensuing process of translation results in a mediated access to the content of the images, the meanings of which can only be determined on the basis of knowledge of the contexts in which artworks and their creators existed.

The annotation of constcamer paintings by means of controlled vocabularies enables the retrieval of information by expert and non-expert users alike. This information is collected by looking, and by identifying what is seen. My type of dataset makes it possible to archive a large number of identifications and the relations between these identifications, as well as to share them with the scholarly community and an interested audience. The constcamer dataset is thus a tool that allows for better vision. The act of interpretation, or the art of understanding what a certain representation means, is not recorded digitally because – as is wisely inscribed on a piece of paper depicted in *The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73] – “*aly et alia vident*” or, “others see it yet otherwise.”<sup>178</sup>

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<sup>178</sup> Gorman and Marr, ““Others See It Yet Otherwise,”” 88.

## Possibilities and limitations of the constcamer dataset

Having to be precise when naming the individual entities depicted in constcamer paintings actually leads to improved vision. A shark tooth [Appendix D.7] or sector [Appendix D.10] can easily be overlooked, but this is less likely when applying a label to each representation in a painting. In this way annotation promotes accuracy, which generates a more extensive overview of what is displayed in the seventeenth-century pictures of collections. Moreover, by looking at constcamer paintings collectively, repetitions of subject matter and certain entities can readily be observed.

At the same time, there are the issues of transformation and translation. As we have seen, the dataset requires a transformation of images into data. These data are a modern interpretation of the pictorial content and require additional translation to expose historical and ideological meanings. It should be remembered that historical terms and concepts are not necessarily part of the vocabularies used. For example, “fish tongues” or “tongue stones” are not included in the Getty’s AAT, but “shark teeth” are, yet without reference to earlier interpretations.<sup>179</sup> The constcamer dataset is therefore not an interpretation or conclusion in itself, but rather a reference for further analysis.

Naturally, what can be taken out of the constcamer dataset depends on what has been put in. Since filling the dataset is time-consuming, the main limiting factor in terms of content is time. Such an effort, moreover, is never complete and reflects the interests and preferences of the maintainer(s) of the dataset, both in terms of the images included and the links that were made. The constcamer dataset is set up so that it can be easily shared with and used by others. Furthermore, by adhering to technical standards, such as the

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<sup>179</sup> <http://vocab.getty.edu/page/aat/300379302> (accessed October 16, 2020).

implementation of the Getty Vocabularies, the dataset can be converted by others into their preferred specifications with ease.

Another added value of the constcamer dataset is the ability to visually compare the annotated entities [e.g. Appendix D]. Yet the meanings embedded in constcamer paintings cannot be derived from pictorial content, and by extension the constcamer dataset, alone. One of the complexities of the pictorial sign is its instability, which means that our visual experience is inherently different from that of seventeenth-century beholders. As a result, contemporary interpretations of constcamer paintings can only be approximated through an awareness and understanding of the conditions that made their creation possible.

# Part I:

## Collecting and recollecting

## 4 Classical antiquity

Constcemer paintings are pictures of collections, but what exactly did a collection entail? And how did pictures function? The early modern notion of collecting stems from classical antiquity. Therefore, the search for answers to these questions begins with a closer look at ancient Greek and Roman conceptions of collecting. Early examples of collections are associated with *musaea* or shrines where the Muses were venerated, and thus it is not surprising that our modern concept of the museum is considered a distant relative. In classical antiquity, things worthy of collecting were kept in various locations, both literally and figuratively. A general description of such a place was the *thesaurus* or storehouse, which was also a metaphor for memory.

The majority of this chapter deals with views about the nature of knowledge and how it can be acquired. A key concept for this study is wonder or *thauma*, which is strongly linked to visual culture. *Thauma* will be explored in depth through Plato's *Theaetetus* and Aristotle's *Metaphysica*. The notion of wonder was associated with travel and curiosity or *curiositas* and considered the beginning of philosophy. Pliny's *Naturalis Historia*, a most influential *thesaurus*, is largely composed of *thaumasia* presented as *memorabilia*. Views on memory and recollection will be introduced mainly through Cicero's *De Oratore* and Aristotle's *De Memoria et Reminiscentia*. This chapter concludes with the role of imagery, and the creative forces of both nature and man.

## Muses and *musaea*

Collections of antiquity have come down to us in writing, rather than assemblages of material objects kept in a certain place. Moreover, collecting did not per definition include the assemblage of objects – the concept was far more immaterial in its origins. In classical antiquity, the first museums or *musaea* were sanctuaries dedicated to the Muses. References to such sanctuaries can be found, for example, in the writings of Pausanias (ca. 110-ca. 180 AD). His *Description of Greece* (9.29) includes the museum of Helicon, a shrine for the Muses on Mount Helicon.<sup>180</sup> Some traditions speak of three Muses (*Melete* or Practice, *Mneme* or Memory, and *Aoede* or Song), but generally the Muses are considered to be nine in number, as established by Hesiod (ca. 750-ca. 650 BC) about eight centuries earlier.

According to Hesiod's *Theogony* (ca. 730-700 BC), Mnemosyne (Titan or pre-Olympian goddess of Memory) gave birth to the Muses by sleeping with Zeus (king of the gods of Mount Olympus) on nine consecutive nights. The *Theogony* opens with a hymn to the Muses, calling them by their names: "Cl[e]io and Euterpe, Thal[e]ia, Melpomene and Terpsichore, and Erato and Polyhymnia and Urania and Calliope, who is the chiefest of them all."<sup>181</sup> Each of the Muses is associated with an individual field of responsibility. Thus, Clío is the Muse of history, Euterpe of lyric poetry, Thalia of comedy, Melpomene of tragedy, Terpsichore of choral song and dance, Erato of love poetry, Polyhymnia of sacred hymns, Urania of astronomy, and Calliope of epic poetry.<sup>182</sup>

<sup>180</sup> <https://www.theoi.com/Text/Pausanias9B.html#13> (accessed April 14, 2020).

<sup>181</sup> Hes. Th. 63, available via <http://data.perseus.org/citations/urn:cts:greekLit:tlg0020.tlg001.perseus-eng1:63-103> (accessed April 14, 2020).

<sup>182</sup> <https://www.theoi.com/Ouranios/Mousai.html> (accessed April 14, 2020); Chatzivasilioi, "Mnemosyne, Mnémé, Memoria," 2018, 45; Deckers, Moormann, and Schindler, "Musen," 2012, 191. A defined iconography emerged only at the beginning of the Roman Imperial period (ca. 27 BC).

In the *Iliad* (8<sup>th</sup> century BC) by Homer (9<sup>th</sup> or 8<sup>th</sup> century BC), Mount Olympus is said to have been the birthplace, as well as the place of residence, of the Muses, and accordingly this mountain is attested as the oldest place of worship of the Muses. The places mostly associated with the Muses, however, are two mountains in Boeotia (a region of ancient Greece), Mount Parnassus and Mount Helicon.<sup>183</sup> The latter housed the Hippocrene, a spring created by Pegasus' hooves [e.g. Fig. 98], and the so-called Valley of the Muses on the eastern slopes. Delphi, known by the ancient Greeks as the navel (*omphalos*) or center of the world, is located on the southwestern slope of Mount Parnassus. This city is known for the Oracle of Delphi, residing at the Temple of Apollo. The epithet *Musagetes* designates Apollo as the leader of the Muses, accompanying their song with a lyre [e.g. Fig. 34].<sup>184</sup>

Besides natural landmarks, cult shrines were also erected in settings such as the Academy of Plato (428/7-342/3 BC) near Athens, in or near a grove of trees dedicated to Athena, and the Peripatetic school founded by Aristotle (384-322 BC) at the Lyceum, a temple near Athens dedicated to Apollo.<sup>185</sup> The cult of the Muses was the religious basis of the philosophical studies undertaken at these institutions. Aristotle had studied at Plato's Academy for twenty years (until 347 BC), and became the tutor of Alexander the Great (356-323) from 343 BC onwards. In 331 BC, when the Lyceum was only three years old, Alexander founded the city of Alexandria in Egypt where the famous *Musaeum* was built, an institution equally dedicated to learning and the preservation of cultural memory.<sup>186</sup> The Alexandrian

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<sup>183</sup> Deckers, Moormann, and Schindler, "Musen," 2012, 186.

<sup>184</sup> Deckers, Moormann, and Schindler, 186.

<sup>185</sup> Bounia, *The Nature of Classical Collecting*, 293; Rutledge, *Ancient Rome as a Museum*, 22.

<sup>186</sup> Bounia, *The Nature of Classical Collecting*, 293–94.

*Musaeum* included the renowned Library and a large community of scholars, poets, and philosophers.<sup>187</sup>

The connection between a *musaeum* or a place dedicated to the Muses and a collection can be found in the offerings that decorated such shrines. Works of art and relics formed an assemblage in groves or sanctuaries where the Muses were thought to be present.<sup>188</sup> As Pliny the Elder (23/24-79 AD) recounts in his *Naturalis Historia* (77-79 AD), the Muses could be found primarily in nature, and he makes use of the term *musaea* in his chapter on pumice, since pieces of this porous stone are said to be used to artificially create caverns or grottoes.<sup>189</sup> In turn, Pliny attempted to collect all knowledge worthy of history in his *Naturalis Historia*. History is understood here as “enquiry” from the ancient Greek word *historia*.<sup>190</sup> Pliny relied on Aristotle’s scientific taxonomies to catalogue his collection, the totality of which is reminiscent of the Alexandrian *Musaeum*.<sup>191</sup>

## Storehouses of wonders

Pliny thought of his work as a *thesaurus*, as can be gathered from the dedication. It refers to a certain Domitius Piso, who supposedly said that “we ought to make not merely books, but valuable collections” (“*quoniam, ut, ait Domitius Piso, thesauros oportet esse, non libros*”).<sup>192</sup>

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<sup>187</sup> Rutledge, *Ancient Rome as a Museum*, 22. Some notable figures that were active at the *Musaeum* are Euclid (ca. 350-ca. 250 BC), Archimedes (ca. 287-ca. 212 BC), and Hero (ca. 10-ca. 70 AD).

<sup>188</sup> Bounia, *The Nature of Classical Collecting*, 294.

<sup>189</sup> According to Pliny, “This name [pumice] is very generally given, it is true, to those porous pieces of stone, which we see suspended in the erections known as ‘musæa,’ with the view of artificially giving them all the appearance of caverns.” See <http://data.perseus.org/citations/urn:cts:latinLit:phi0978.phi001.perseus-eng1:36.42> (accessed April 14, 2020); Pliny, *The Natural History*, 36.42; Findlen, “The Museum,” 60.

<sup>190</sup> Bounia, *The Nature of Classical Collecting*, 180; Kusukawa, “The Uses of Pictures,” 76.

<sup>191</sup> Bounia, *The Nature of Classical Collecting*, 209; Carey, *Pliny’s Catalogue of Culture*, 17–19. Alexandria became part of the Roman Empire after the city was captured by Augustus in the Battle of Alexandria of 30 BC. See also Plin. Nat. 35.40.

<sup>192</sup> Pliny, *The Natural History*, 1.dedication.

The Latin word *thesaurus*, from the ancient Greek *thesauros* meaning storehouse or treasure, refers to assemblages in sanctuaries such as *musaea*.<sup>193</sup> Furthermore, the storehouse or *thesaurus* is an ancient metaphor for memory or *mneme* (the ancient Greek word for memory).<sup>194</sup> As we have already established, the goddess of Memory (Mnemosyne) was the mother of the Muses, goddesses of knowledge and (artistic) inspiration.

In the *Naturalis Historia*, Pliny recorded all kinds of *thaumasia* or wondrous things related to Rome and the Roman world.<sup>195</sup> *Thaumasia* had been collected in books by the Greeks in the Hellenistic period, roughly spanning from the death of Alexander the Great to the emergence of the Roman Empire (323-ca. 31 BC). One of these Greeks was Callimachus (ca. 310/05-ca. 240 BC), active at the Alexandrian *Musaeum* and associated with the origins of the literary genre. It existed only on papyrus, so without a physical or material counterpart (except the papyri themselves), and is nowadays commonly referred to as “paradoxography,” from the ancient Greek words *paradoxos* (meaning “contrary to expectation”) and *grapho* (meaning “to write” or “to draw”).<sup>196</sup>

### *Thauma*

Pliny used paradoxographers as a source and devotes a large part of his book to *mirabilia* (the Latin word for *thaumasia*), thus turning these wondrous things into *memorabilia* or things to be remembered. In other words, an “archive of wonders.”<sup>197</sup> The interest in

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<sup>193</sup> Bounia, *The Nature of Classical Collecting*, 208.

<sup>194</sup> “The verb *mnemai* means both ‘to remember’ and ‘to desire, woo, court;’ and a *mnema*, or grave monument, is thus a site of memory and *eros* [love] both.” Neer, *The Emergence of the Classical Style*, 50.

<sup>195</sup> Bounia, *The Nature of Classical Collecting*, 215.

<sup>196</sup> Bounia, 180.

<sup>197</sup> Bounia, 180.

wonder can be traced back to Plato's *Theaetetus* (ca. 369 BC) and Aristotle's *Metaphysica*, a selection of Aristotle's works compiled, and given its name, by a first century AD editor.<sup>198</sup>

### Plato's *Theaetetus*

In the dialogue *Theaetetus*, the protagonists Socrates and Theaetetus discuss the nature of knowledge. Plato, through Socrates, speaks of Thaumás, a sea god whose name is derived from *thauma* (meaning "wonder"). Hesiod had already established that Thaumás was married to the Oceanid Electra, and they had a child called Iris (goddess of the Rainbow), who is known as the messenger of the Olympian gods.<sup>199</sup> The section of the dialogue that mentions these deities deals with the first of three definitions of knowledge proposed by Theaetetus, and subsequently refuted by Socrates.

The first definition is "knowledge is perception." Socrates uses the "cold wind" argument and the theory of flux to reason that perception may vary from person to person.<sup>200</sup> In reaction, Theaetetus exclaims: "By the gods, Socrates, I am lost in wonder when I think of all these things, and sometimes when I regard them it really makes my head swim."<sup>201</sup> To which Socrates responds: "Theodorus [Theaetetus' mathematics tutor] seems to be a pretty good guesser about your nature. For this feeling of wonder shows that you are a philosopher, since wonder is the only beginning of philosophy, and he who said that Iris was the child of Thaumás made a good genealogy."<sup>202</sup>

<sup>198</sup> <https://plato.stanford.edu/entries/aristotle-metaphysics/> (accessed April 16, 2020).

<sup>199</sup> Hes. Th. 240 & 767, available via <http://data.perseus.org/citations/urn:cts:greekLit:tlg0020.tlg001.perseus-eng1:240-269;>  
<http://data.perseus.org/citations/urn:cts:greekLit:tlg0020.tlg001.perseus-eng1:767-806> (accessed April 16, 2020).

<sup>200</sup> <https://plato.stanford.edu/entries/plato-theaetetus/#LasObjPro177179> (accessed April 16, 2020).

<sup>201</sup> Plat. Theaet. 155c, available via <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:155c> (accessed April 16, 2020).

<sup>202</sup> Plat. Theaet. 155d. See <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:155d> (accessed April 16, 2020). For the ancient Greek version of the text, see

In my view, this passage has received the consideration that it deserves.

Etymologically, Iris is derived from the ancient Greek word *ero* or *eiro* (meaning “to speak” or “to join”).<sup>203</sup> She functions not only as the messenger between the gods, but also between the gods and humans (i.e. heaven and earth). Socrates’ statement thus subtly indicates that wonder (Thaumas) is able to generate a connection or communication (Iris) between the material world and a reality outside of that world.<sup>204</sup> As such Iris can act as a bridge between physical perception and philosophical beholding.

Philosophy begins in a feeling of wonder about the appearance of the material world, which directs our attention to the contemplation of immaterial Forms and Ideas, and thus to knowledge.<sup>205</sup> Together the ancient Greek words *philos* and *sophos* spell out a love of wisdom. The observable world is, in Plato’s theory, a mere copy or image of the real (i.e. immaterial) world. Nevertheless, sense perceptions can be imprinted upon memory like a seal ring makes an impression in wax.<sup>206</sup> As a result, for Plato memory involves “seeing internal pictures.”<sup>207</sup>

In classical antiquity, two major metaphors were in use concerning models for memory, both of which are recorded in Plato’s *Theaetetus* (ca. 369 BC). The first model for memory is the *tabula memoriae*, or the seal-in-wax model.<sup>208</sup> The second is that of the

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<http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-grc1:155d> (accessed October 23, 2020). This genealogy is documented in Hes. Th. 750.

<sup>203</sup> <https://www.theoi.com/Pontios/Iris.html> (accessed April 16, 2020).

<sup>204</sup> However, the designation “iris” of the colored area around the pupil of the eye was not used, as far as is known, until the first century BC, as handed down by Rufus of Alexandria (also known as Rufus of Ephesus), a Greek physician during the reign of Emperor Trajan (98–117 AD). See Magnus, *Ophthalmology of the Ancients*, 49; August, “The Contents of the Opticorum Libri Sex,” 84.

<sup>205</sup> <https://plato.stanford.edu/entries/plato/> (accessed April 16, 2020); Lorenz, *Ancient Mythological Images*, 169–70.

<sup>206</sup> Plat. Theaet. 191c-e, see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:191c> (accessed April 16, 2020).

<sup>207</sup> Carruthers, *The Book of Memory*, 19.

<sup>208</sup> Plat. Theaet. 191c-d (the Wax Tablet), see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:191c> (accessed April 16, 2020); Carruthers, 24.

*thesaurus sapientiae* or storehouse (of memory or wisdom), which reflects both the contents of memory and its internal organization.<sup>209</sup> The part of the dialogue between Socrates and Theaetetus that discusses these models deals with the second definition of “knowledge as true judgement.” Discussion of the first definition (knowledge is perception) led to the conclusion that not our sensory experiences, but our reasoning about these sensations, contain knowledge.<sup>210</sup>

The next point of attention is how judgements (both true and false beliefs) can be obtained from sense perceptions.<sup>211</sup> In addition to the wax tablet metaphor, Plato describes the storehouse in the form of an aviary. Different types of knowledge are equated with different types of birds kept in an aviary. They are all in the possession of the owner, but this person is not always able to catch each individual bird, and thus to have instant access to all of the acquired knowledge.<sup>212</sup> The metaphor can be boiled down to the presence of active knowledge (caught bird) and latent knowledge (bird somewhere in the aviary) in memory.<sup>213</sup> Ultimately, the *Theaetetus* showcases that it was not yet known how to define the nature of (philosophical) knowledge.<sup>214</sup>

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<sup>209</sup> Plat. Theaet. 197c (the Aviary), see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:197c> (accessed April 17, 2020); Carruthers, 18–55.

<sup>210</sup> Plat. Theaet. 186d, see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:186d> (accessed April 17, 2020).

<sup>211</sup> <https://plato.stanford.edu/entries/plato-theaetetus/> (accessed April 17, 2020).

<sup>212</sup> Plat. Theaet. 197d, see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg006.perseus-eng1:197d> (accessed April 17, 2020).

<sup>213</sup> <https://plato.stanford.edu/entries/plato-theaetetus/> (accessed April 17, 2020). Carruthers speaks not of an aviary, but more specifically of pigeons kept in pigeon-holes. Carruthers, *The Book of Memory*, 42–43.

<sup>214</sup> Neer, *The Emergence of the Classical Style*, 65.

### Aristotle's *Metaphysica*

Aristotle adopted and adapted Plato's ideas in his own theories about knowledge and wisdom. The *Metaphysica* opens with the line that "All men naturally desire knowledge."<sup>215</sup> To clarify this statement, Aristotle emphasized our appreciation of the senses. Of the five senses – sight, hearing, taste, smell and touch – men are said to prefer sight, because it "best helps us to know things, and reveal many distinctions."<sup>216</sup> Knowledge is thus presented as a kind of seeing.<sup>217</sup>

Aristotle argued that because of the senses men and also some animals acquire the faculty of memory. Memory is in turn considered crucial for acquiring experience. Through experience men acquire knowledge (*episteme* in ancient Greek, *scientia* in Latin) and art (*techne* in ancient Greek, *ars* in Latin), since knowledge of the universal is derived from the knowledge of numerous particular experiences.<sup>218</sup> While the arts or productive sciences (technical knowledge) deal with the ever-changing sublunary world and are necessary or useful, theoretical or speculative science (theoretical knowledge) deals with the eternal and is "useless," in the sense that it does not directly serve a practical purpose.<sup>219</sup>

The adjective theoretical deserves some further study. A *theoros* in ancient Greece was a spectator at the theater (*theatron*) or a festival. *Theoros* is closely linked to the word *theatron*, which denotes a "place for seeing."<sup>220</sup> *Theoria* is derived from *theoros* and translates in Latin as *contemplatio*, meaning contemplation, or looking at things with the

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<sup>215</sup> Aristotle, *Metaphysics*, 1.980a. For the ancient Greek version of the text, see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0086.tlg025.perseus-grc1:1.980a> (accessed October 23, 2020). For the English translation, see <http://data.perseus.org/citations/urn:cts:greekLit:tlg0086.tlg025.perseus-eng1:1.980a> (accessed April 16, 2020).

<sup>216</sup> Aristotle, 1.980a.

<sup>217</sup> Nightingale, *Spectacles of Truth*, 201.

<sup>218</sup> Nightingale, 223; Lohr, "Aristotelian 'Scientia,'" 261.

<sup>219</sup> Aristotle, *Metaphysics*, 1.981b.

<sup>220</sup> Nightingale, *Spectacles of Truth*, 187.

addition of understanding.<sup>221</sup> So *theoria* is not understood as looking at something merely with the sense of sight, but rather as a kind of intellectual vision.<sup>222</sup> It is interesting to note that these terms are all etymologically linked to the same root of *thauma* (wonder) or *theomai* (to look at or to view).<sup>223</sup>

According to Aristotle, Pythagoras (ca. 570-ca. 495 BC) once said that he had come into being to behold the heaven, and to be a *theoros* of nature.<sup>224</sup> Similarly, Plato had noted in his *Timaeus* (ca. 360 BC) that the contemplation of the heavens through eyesight fills man with a desire for philosophy.<sup>225</sup> Both statements point towards man's desire and ability to acquire knowledge of the eternal or universal by studying the world around us.

Theoretical science was thought to come closer to wisdom, the knowledge of "first principles and causes" (i.e. *metaphysica*), than productive science, because of its uselessness.<sup>226</sup> Aristotle explained that this is the case because the former is not subject to a practical outcome but undertaken intrinsically for the sake of knowledge.

That it [theoretical science] is not a productive science is clear from a consideration of the first philosophers. It is through wonder that men now begin and originally began to philosophize; wondering in the first place at obvious perplexities, and then by gradual progression raising questions about the greater matters too, e.g. about the changes of the moon and of the sun, about the stars and about the origin of the universe. Now he who wonders and is perplexed feels that he is ignorant (thus the myth-lover is in a sense a philosopher, since myths are composed of wonders); therefore if it was to escape ignorance

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<sup>221</sup> Jaroszynski, *Science in Culture*, 2007, 13; Horky, *Cosmos in the Ancient World*, 212.

<sup>222</sup> Nightingale, *Spectacles of Truth*, 188.

<sup>223</sup> Jaroszynski, *Science in Culture*, 2007, 13; Blair, *The Theater of Nature*, 154.

<sup>224</sup> Nightingale, *Spectacles of Truth*, 193.

<sup>225</sup> Plat. Tim. 47a7-b2, via Guest, *The Understanding of Ornament*, 32.

<sup>226</sup> Aristotle, *Metaphysics*, 1.982b.

that men studied philosophy, it is obvious that they pursued science for the sake of knowledge, and not for any practical utility. The actual course of events bears witness to this; for speculation of this kind began with a view to recreation and pastime, at a time when practically all the necessities of life were already supplied. Clearly then it is for no extrinsic advantage that we seek this knowledge; for just as we call a man independent who exists for himself and not for another, so we call this the only independent science, since it alone exists for itself.<sup>227</sup>

Just as Plato had done before him, Aristotle identifies wonder (*thauma*) as the beginning of philosophy. It is presented as the key feeling – the desire to know something – that leads men to enquiry (*historia*), with the purpose of dispelling ignorance (*agnoieo* meaning “not to perceive”).

The acquisition of this knowledge, however, must in a sense result in something which is the reverse of the outlook with which we first approached the inquiry. All begin, as we have said, by wondering that things should be as they are, e.g. with regard to marionettes, or the solstices, or the incommensurability of the diagonal of a square; because it seems wonderful to everyone who has not yet perceived the cause that a thing should not be measurable by the smallest unit. But we must end with the contrary and (according to the proverb [“second thoughts are better”]) the better view, as men do even in these cases when they understand them; for a geometrician would wonder at nothing so much as if the diagonal were to become measurable.<sup>228</sup>

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<sup>227</sup> Aristotle, 1.982b.

<sup>228</sup> Aristotle, 1.983a.

The feeling of wonder ceases to exist when a previously inexplicable phenomenon (natural or mythical) is understood, and knowledge acquired. Aristotle's *sophos* (wise man or sage) aims at theoretical knowledge and appoints theology as the first philosophy, since the "sole or chief possessor of this sort of [theoretical] knowledge" is god (*theos*), a divine being and a first cause (*primum mobile*) that moves all things.<sup>229</sup>

Aristotle's works in particular resulted in the emergence of paradoxography or the literary genre of collections of *thaumasia*. Thus, it becomes clear that the wondrous things recorded by paradoxographers were intended to stimulate a sense of wonder by raising questions about causes and to encourage the search for answers in the pursuit of wisdom. The literary genre relied on other literature (rather than experience) and received credibility based on the sources cited.<sup>230</sup> Furthermore, each *thaumasion* was associated with a certain place (*topos*), and thus organized according to topological and geographical principles.<sup>231</sup> This tradition was taken up by Roman writers such as Cicero (106-43 BC) and Pliny. The hodological ordering technique, which connects the narrative via geographical pathways, is prominent in the latter's *Naturalis Historia*.<sup>232</sup>

#### Travel and curiosity

The *Naturalis Historia* as a collection is strongly influenced by Stoicism.<sup>233</sup> This school of thought was founded by Zeno of Citium (ca. 334-ca. 262 BC) at the Stoa Poikile, a decorated

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<sup>229</sup> Aristotle, 1.983a; Aristotle, *Metaphysics*, 12.1070b-71a; Nightingale, *Spectacles of Truth*, 205 & 236. We will return to the concept of the *primum mobile* in chapters 5 and 11.

<sup>230</sup> Keyser and Scarborough, *The Oxford Handbook*, 431–34.

<sup>231</sup> Keyser and Scarborough, 436.

<sup>232</sup> Keyser and Scarborough, 438.

<sup>233</sup> Other influences are Platonism, Peripatetics, and Epicureanism. See Bounia, *The Nature of Classical Collecting*, 176.

colonnade on the north side of the Agora, in Athens around 300 BC. The Stoic Seneca the Younger (ca. 4 BC-65 AD), in his essay *On Leisure* of 62 AD, observed the following.

Some sail the sea and endure the hardships of journeying to distant lands for the sole reward of discovering something hidden and remote. It is this that collects people everywhere to see sights, it is this that forces them to pry into things that are closed, to search out the more hidden things, to unroll the past, and to listen to the tales of barbarous tribes.<sup>234</sup>

Stoic philosophy assumed that man's desire and ability to travel had naturally come into being, just like man's curiosity, "so that he would discover the wonders of the universe."<sup>235</sup>

Pliny's son, Pliny the Younger (AD 61-113), expressed his mixed feelings about travel in a letter (to Gallus) of around 108 AD. "We are always ready to make a journey and cross the sea in search of things we fail to notice in front of our eyes."<sup>236</sup> The significance of eyesight is again put forward in this quote.

Both travel and curiosity are central concepts to the *Metamorphoses* (ca. 170 AD) of Apuleius (ca. 124-ca. 170 AD). In this novel, the protagonist Lucius is transformed into an ass [e.g. Fig. 173] because of his insatiable *curiositas* or curiosity. Travel formed a key part in Lucius' eventual return to human form. Gathering knowledge through curiosity and travel can be considered as the "alpha and omega" of collecting.<sup>237</sup> The Latin word *curiositas*, meaning the desire of knowledge, was probably first used by Cicero in his *Letters to Atticus* (ca. 68-44 BC).<sup>238</sup> In these letters Cicero also discusses the sculptures, acquired by Atticus,

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<sup>234</sup> Seneca, *On Leisure*, 5.1-2, as quoted in Foubert, "Men and Women Tourists' Desire," 9.

<sup>235</sup> Foubert, 9.

<sup>236</sup> Foubert, 10.

<sup>237</sup> Daston, "The Factual Sensibility," 455.

<sup>238</sup> Foubert, "Men and Women Tourists' Desire," 8; Wood, "'Curious Pictures'," 336.

for the Academy and Lyceum of his villa in Tusculum: Cicero himself was known as a collector.<sup>239</sup>

#### Pliny on collecting

According to Pliny, his *Naturalis Historia* describes “the nature of things (*rerum*), and life as it actually exists [...] my road is not a beaten track, nor one which the mind is much disposed to travel over.”<sup>240</sup> Its purpose was to treat the things that the Greeks include in the *enkyklios* (“complete system”) *paideia* (“learning,” or *humanitas* in Latin), in other words an all-round education, and to commit to memory the grandeur of the ancients.<sup>241</sup>

Pliny opens with a volume on the world and its elements, and an account of the name of the world. The Greeks called the world *kosmos*, which means “ornament,” while the Romans call it *mundus*, “from its perfect and complete elegance.”<sup>242</sup> Pliny boldly claims that his *Naturalis Historia* is a description of the world in its entirety, and conceptualizes the world as both the work of nature and nature itself.<sup>243</sup> Through his use of language, Pliny suggests that his work is also both a work of nature and nature itself, and thus constitutes the world. As a result, the world emerges as an ornament (*kosmos* or *mundus*) of speech: a rhetorical flourish.<sup>244</sup>

Rhetoric is the art of persuasion that uses language to instruct or persuade a beholder, in this case either a reader or a listener. The 20,000 noteworthy things (*res*) that

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<sup>239</sup> Bounia, “The Nature of Collecting,” 169 & 310–11. The denominations of Cicero’s *gymnasi*, the Academy and Lyceum, are indeed references to Plato’s Academy and Aristotle’s Lyceum. We will return to Cicero’s collection in the next chapter.

<sup>240</sup> Pliny, *The Natural History*, 1.dedication.

<sup>241</sup> Carey, *Pliny’s Catalogue of Culture*, 17.

<sup>242</sup> Pliny, *The Natural History*, 2.3; Carey, *Pliny’s Catalogue of Culture*, 32; Horky, *Cosmos in the Ancient World*, 6; Guest, *The Understanding of Ornament*, 21–66.

<sup>243</sup> Pliny, *The Natural History*, 2.1; Carey, *Pliny’s Catalogue of Culture*, 19–20; Bounia, *The Nature of Classical Collecting*, 176.

<sup>244</sup> Carey, *Pliny’s Catalogue of Culture*, 32; Bounia, “The Nature of Collecting,” 217.

make up Pliny's world represent a rhetorical understanding of collecting that equates the notions of textual and material collections. Their common factor is that both are seen as repositories of knowledge.<sup>245</sup> In this understanding, collecting means preserving, not only the appearances of the assembled things, but also their associated meanings.<sup>246</sup>

Furthermore, the account of the world in the *Naturalis Historia* is a visual one, rooted in the act of viewing.<sup>247</sup>

In his account of man, Pliny asks "what is there that does not appear marvelous, when it comes to our knowledge for the first time? How many things, too, are looked upon as quite impossible, until they have been actually effected?"<sup>248</sup> This recalls Aristotle's reference to the proverb "second thoughts are better" and his discussion of *thauma* and its association with sight.

As we have established, offerings in the form of material things were initially amassed at *musaea*. In the Roman Empire similar assemblages were stored in temples and other public buildings. Marcus Claudius Marcellus (ca. 268-208 BC) is said to be the first to bring artefacts from Syracuse (Sicily) to Rome, thus initiating the practice of importing objects (as a result of travel) during the triumphs of generals.<sup>249</sup> Pliny furthermore records that the Library of the Alexandrian *Musaeum* was decorated with (bronze) portraits to celebrate and commemorate men of education and culture. This practice was also brought

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<sup>245</sup> Bounia, "The Nature of Collecting," 219.

<sup>246</sup> Bounia, 231; Carey, *Pliny's Catalogue of Culture*, 85.

<sup>247</sup> "Ut nihil desit in spectando terrarium situ" in Carey, *Pliny's Catalogue of Culture*, 70; Pliny, *The Natural History*, 6.39.

<sup>248</sup> Pliny, *The Natural History*, 7.1. Translated as "How many things are judged impossible before they actually occur?" in Van Dyck and Vermeir, "Varieties of Wonder," 483.

<sup>249</sup> Bounia, "The Nature of Collecting," 192–93.

to Rome, for example in the public library commissioned by Gaius Asinius Pollio (75 BC-4 AD).<sup>250</sup>

In the domestic sphere, ancestral masks made of wax preserved the likenesses of deceased persons (usually family members) and were kept in the *atrium*, the central open court in a Roman house.<sup>251</sup> Pliny's stories about the origins of both painting and sculpture are closely related to portraiture. Both inventions are situated in Sicyon (Corinth). Painting is said to originate from tracing lines around the human shadow, while the invention of sculpture is attributed to the potter Butades.<sup>252</sup> The loved one of the potter's daughter was about to embark on a long journey. After tracing the profile of his face on a wall, Butades filled the outline with clay "and so made a face in relief."<sup>253</sup> In these contexts, memory plays a major role.

### Memory and recollection

Memory is the most essential gift in life, according to Pliny, and enables the preservation of persons and things for posterity.<sup>254</sup> Memory is also one of the five canons of rhetorical training – *inventio* (invention), *dispositio* (disposition), *elocutio* (style), *memoria* (memory), and *pronuntiatio* or *actio* (delivery).<sup>255</sup> The primary sources on the classical art of memory are the *Rhetorica ad Herennium* (ca. 80 BC) of which the author is unknown, *De Oratore* (55 BC) by Cicero, and the *Institutio Oratoria* (95 AD) by Quintilian (ca. 35-ca. 100 AD).<sup>256</sup> In the

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<sup>250</sup> Pliny, *The Natural History*, 35.2; Bounia, "The Nature of Collecting," 219. Following this example, Cicero also decorated his study with busts.

<sup>251</sup> Pliny, *The Natural History*, 35.2; Carey, *Pliny's Catalogue of Culture*, 142.

<sup>252</sup> Pliny, *The Natural History*, 35.5.

<sup>253</sup> Pliny, 35.43.

<sup>254</sup> Pliny devoted an entire chapter of book seven on the subject of memory: Pliny, 7.24; Carey, *Pliny's Catalogue of Culture*, 138.

<sup>255</sup> Kuwakino, "The Great Theatre of Creative Thought," 308.

<sup>256</sup> Hermans, "Reading Rhetoric," 252. The *Rhetorica ad Herennium* was considered to be a work by Cicero in the early modern period.

following we will concentrate on Cicero, who tried to reconcile Platonic and Aristotelian views on the arts.<sup>257</sup>

In general, the art of memory was thought to be invented by Simonides of Ceos (ca. 556-468 BC). In his *De Oratore*, Cicero recounts that Simonides discovered that order facilitates memory. Memory could be improved by making use of places (*topoi* in ancient Greek or *loci* in Latin) as well as symbols or impressions (*phantasmata* in ancient Greek or *imagines* in Latin) arranged in those places, so that the sequence of places determines the order, while the symbols refer to the things to be remembered.<sup>258</sup> Memory is of relevance to the ideal orator “in order to be able to debate any subject with competence.”<sup>259</sup> As a result, the knowledge of the orator (*doctus orator*) should not be restricted to one domain, and therefore Cicero compared rhetoricians with philosophers.<sup>260</sup>

In accordance with Plato and Aristotle, Cicero explained that sight is the most acute of the five senses and is able to imprint images onto the mind. As we have seen, Plato had characterized memory as seeing internal pictures. Similarly, Aristotle put forward that mental images are essential for thought processes.<sup>261</sup> The model at the basis of this conception of memory is that of the *tabula memoriae* or the wax tablet metaphor.<sup>262</sup> The faculty of artificial memory, Cicero continues, enables memorizing “according to the systematic approach of a consummate painter, who keeps the different localities distinct

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<sup>257</sup> Meganck, “Rubens on the Human Figure,” 55. Plato rejected the mimetic arts because they imitate appearances (of the material world) instead of the true (immaterial) Forms and Ideas. See also Lorenz, *Ancient Mythological Images*, 169–70.

<sup>258</sup> Cicero, *De Oratore*, book 2, 350-355, available via [http://pages.pomona.edu/~cmc24747/sources/cic\\_web/de\\_or\\_2.htm](http://pages.pomona.edu/~cmc24747/sources/cic_web/de_or_2.htm) (accessed June 24, 2020).

<sup>259</sup> Kuwakino, “The Great Theatre of Creative Thought,” 308; Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 6.

<sup>260</sup> Weststeijn, *Art and Antiquity*, 207.

<sup>261</sup> Nussbaum and Rorty, *Essays on Aristotle*, 305; Yates, *The Art of Memory*, 32. Yates’ seminal work on the history of the mnemonic use of images was first published in 1966.

<sup>262</sup> “The idea that the memory stores, sorts, and retrieves material through the use of some kind of mental image was not attacked until the eighteenth century,” according to Carruthers, *The Book of Memory*, 18–19.

from each other by employing a variety of shapes.”<sup>263</sup> The forming of mental images is thus explicitly related to painting.

Aristotle furthermore distinguishes between memory (*mneme*) and recollecting (*anamnesis*). In his *De Memoria et Reminiscentia*, part of the *Parva Naturalia* (literally: small natures), Aristotle describes recollection as the active, intellectual process that is distinct from the passive, receiving nature of memory.<sup>264</sup> Human beings were thought to be made up of (corporeal) body, soul (*psukhe* in ancient Greek, *animus* in Latin) and mind or intellect (*nous* in ancient Greek, *mens* in Latin), with soul referring to the organization and function of a human being, and mind as that aspect of its function that is able to understand and acquire wisdom.<sup>265</sup> The mind is then divided into an active intellect (*nous poietikos* for recollection) and a passive intellect (*nous pathetikos* for memory).<sup>266</sup>

In this understanding, memory and recollecting are closely related to the immaterial nature of collecting. In addition to the textual (e.g. *Naturalis Historia*) and material (e.g. *musaea*) collections of classical antiquity, the imaginary storehouse could be of use to the philosopher, orator, or any other person.<sup>267</sup> The art of memory often features an architectural setting like a house with several rooms (*loci*), in which images (*imagines*) of things to be remembered could be placed. By mentally walking through the spaces in a certain order, a speech, for example, could be committed to artificial memory.<sup>268</sup> The act of revisiting is that of recollecting, which activates the structurally stored knowledge.

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<sup>263</sup> Cicero, *De Oratore*, book 2, 358-359. This phrase “denotes what we call ‘perspective,’” according to Carruthers, 91.

<sup>264</sup> Carruthers, 79; Nussbaum and Rorty, *Essays on Aristotle*, 297. The *Parva Naturalia* can be regarded as short treatises on the microcosm or human beings [e.g. Fig. 175].

<sup>265</sup> Carruthers, *The Book of Memory*, 60; Esposito, “Ignis Artificiosus,” 262.

<sup>266</sup> Nussbaum and Rorty, *Essays on Aristotle*, 310. The term *poietikos* (from *poiesis*) will be discussed in more detail below.

<sup>267</sup> Bounia, *The Nature of Classical Collecting*, 161.

<sup>268</sup> This model of memory is similar to Plato’s aviary or the *thesaurus sapientiae*.

## Myths and fables

In his *Metaphysica*, Aristotle claimed that the “the myth-lover is in a sense a philosopher, since myths are composed of wonders.”<sup>269</sup> Myths play a special role in philosophy and serve to initiate the process of gathering knowledge and to dispel ignorance. Once the cause of a previously inexplicable phenomenon is understood, the feeling of wonder ceases to exist, and knowledge is acquired.<sup>270</sup> About three centuries later, Cicero wrote about fables in his *De Natura Deorum* (45 BC). In book 2 we read that “immoral fables [about the gods] contain a decidedly clever scientific theory [*physica ratio*].”<sup>271</sup>

In 8 AD, Ovid (43 BC-17/18 AD) wrote his poem the *Metamorphoses* that recounts the history of the world, from its creation to the death of Julius Caesar (44 BC), through a collection of myths about transformations. In a similar fashion, these wondrous stories were intended to be interpreted allegorically, rather than literally. Ovid’s account of the world in the *Metamorphoses* is again a visual one and is, just like the *Naturalis Historia* that would appear several decades later, rooted in the act of viewing. His poems stress the rivalry between the textual and the pictorial arts.

## Poetry and painting

A comparison between texts and pictures was captured in a short, but highly influential phrase by Horace (65-8 BC): “*Ut pictura poesis*” meaning “as is painting so is poetry.”<sup>272</sup>

Simonides of Ceos, before Horace, had uttered that “Poetry is a speaking picture, [and]

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<sup>269</sup> Aristotle, *Metaphysics*, 1.982b.

<sup>270</sup> Llewelyn, “On the Saying,” 48; Hau, “One Might Rightly Wonder,” 68.

<sup>271</sup> Cicero, *De Natura Deorum*, book 2, 24, as quoted in Esposito, “Ignis Artificiosus,” 256 (note 54). See also Guest, *The Understanding of Ornament*, 59.

<sup>272</sup> Dundas, “Franciscus Junius,” 159–60.

painting a silent poetry.”<sup>273</sup> Poetry is derived from the Greek word *poiesis*, which means “making”. The Latin *poesis* descends from this term. Aristotle used the word *poiesis* for the notion of productivity, as in the *nous poietikos*. His *poiesis* or *techne* (“making” of things) was one of the five forms of true knowledge “in which the maker is the efficient cause that brings something into existence.”<sup>274</sup> In both poetry and painting it is the maker who gives shape to ideas, either textually or pictorially.

#### Nature versus artifice

Aristotle furthermore considered *poiesis* as an imitation of nature or *phusis* in ancient Greek (*physica* in Latin).<sup>275</sup> This brings us to the distinction between nature and artifice (*poiesis/techne*). Nature is generated spontaneously (supposedly by a god), while art is generated artificially (by man).<sup>276</sup> Pliny was highly interested in the region where the two meet: the artifice of nature. As we have seen, Pliny’s world was at once the work of nature and nature herself, both creator and product.<sup>277</sup> The source of art, on the other hand, “is in the maker rather than the product made.”<sup>278</sup> The arts imitate nature, in other words nature is the model of the artist, who will sometimes strive to surpass it in the act of creation.<sup>279</sup>

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<sup>273</sup> This phrase is translated in Dutch by van Mander, who included in *Het Schilder-Boeck* that “*Schilderije stom ghedicht is, en t’Ghedicht sprekende schilderije.*” See Sluijter, *De “Heydensche Fabulen,”* 181.

<sup>274</sup> Nightingale, *Spectacles of Truth*, 200; Smith, *The Body of the Artisan*, 17; Lohr, “Aristotelian ‘Scientia,’” 261–62. For Aristotle’s five forms of true knowledge, see chapter 2. Opinions are not part of his list because they can change and can thus be false.

<sup>275</sup> Lohr, “Aristotelian ‘Scientia,’” 263. *Phusis* can also be translated as growth, see Guest, *The Understanding of Ornament*, 29.

<sup>276</sup> Aristotle, *Metaphysics*, 7.1034a.

<sup>277</sup> Carey, *Pliny’s Catalogue of Culture*, 19.

<sup>278</sup> Nightingale, *Spectacles of Truth*, 200.

<sup>279</sup> Carey, *Pliny’s Catalogue of Culture*, 134.

The *Naturalis Historia* illustrates the competition between art and nature by recounting the story of the painter Pausias and the garland-maker Glycera. In chapter 3 of book 21, Pliny described who invented the art of making garlands.

[It was] an invention due to the ingenuity of the painter Pausias, at Sicyon, and the garland-maker Glycera, a female to whom he was greatly attached, and whose handiwork was imitated by him in colours. Challenging him to a trial of skill, she would repeatedly vary her designs, and thus it was in reality a contest between art and Nature."<sup>280</sup>

Pliny and his Roman contemporaries termed the copy of nature, such as Pausias' paintings, an *imago* (impression).<sup>281</sup> This same concept (plural *imagines*) was used in the art of memory, understood as a method of pursuing wisdom and eloquence.

Aristotle's *De memoria et reminiscentia* had already determined that the mental picture or *phantasma* (plural *phantasmata*) is the "final product of the entire process of sense perception [...]. Every sort of sense perception ends up in the form of a phantasm in memory."<sup>282</sup> Sight, both physical and metaphysical, played a crucial role in this process. The visuality of wonder, identified as the driving force behind philosophy, encouraged the contemplation of the world that would lead to intellectual ascent.<sup>283</sup> Nature and its imitations, in the form of language and pictures (both imagery or *Bildsprache*), stimulated the forming of mental images. Myths and fables in particular appealed directly to the intellect and were in essence rhetorical devices for communicating *insights*.<sup>284</sup>

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<sup>280</sup> Pliny, *The Natural History*, 21.3. See also Hellenistic conceptions of art describing poets as flowers and figural speech as ornaments or garlands, in Guest, *The Understanding of Ornament*, 87.

<sup>281</sup> Carey, *Pliny's Catalogue of Culture*, 136.

<sup>282</sup> Carruthers, *The Book of Memory*, 18–19; Nussbaum and Rorty, *Essays on Aristotle*, 304.

<sup>283</sup> Guest, *The Understanding of Ornament*, 33.

<sup>284</sup> Zenkert, "The Owl and the Birds," 551.

## Summary: sight and knowledge

The notions of collecting that emerged in classical antiquity are strongly linked to sight and to knowledge. Although no definition could yet be given of the nature of knowledge, knowledge itself was presented as a kind of seeing. “For ancient authors, to *know* means to *see*.”<sup>285</sup> Seeing is understood here as the cognitive aspect of physical perception (see also chapter 3). Physical perception, especially with the sense of sight, was thought to result in mental impressions that enable memory. The gaining of such impressions was equated with making prints (seal-in-wax) and also the art of painting. Another metaphor for memory was the *thesaurus sapientiae* or the storehouse of wisdom: a collection. Memory was thought to facilitate the acquisition (or collection) of experience, which was in turn necessary to acquire different forms of knowledge, of the particular (*techne*) and then of the universal (*episteme*).

Wonder (*thauma*) was described in classical antiquity as the beginning of philosophy. Looking at things with the addition of understanding served to counteract ignorance, or the absence of perception. Wonders could be encountered not only through the study of nature and travel, but also through texts, which evoke a mental journey. Similarly, the art of memory represented an immaterial storehouse, a succession of places and images, which made it possible to remember speeches, for example. In addition to the observation of nature (*naturalia*), man-made things (*artificialia*) such as art, poetry, and rhetoric also confronted the beholder with wonders. Understanding their meaning appealed to the intellect and shaped the inner vision, or the collection of immaterial ideas that makes up our knowledge.

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<sup>285</sup> Pomian, “Vision and Cognition,” 211.

## 5 Renaissance receptions

To establish what a collection entailed, and how pictures functioned, this chapter follows up on the Renaissance receptions of the classical conceptions of collecting and recollecting. Such notions informed early modern pictures of collections, and thus the genre of constcamer paintings. The focus is on how some of the concepts associated with collections from classical antiquity were revived and appropriated in sixteenth- and seventeenth-century Europe in general, and the Spanish Habsburg Netherlands in particular. The treatises of two scholars, one born near Venice and the other in Antwerp, guide this account, within which images play a prominent role. In their pursuit of wisdom and eloquence, knowledge of the universe was central.

We will proceed to examine how the universe was conceptualized at the time. Both sensory and intellectual components were considered to be of importance in arriving at knowledge of the universe. Scholars such as the Englishman Francis Bacon proposed the faculty of the imagination as the intermediary between the two. In artistic circles the imagination also gained prominence, together with notions of inspiration and the ingenuity of imitation. The resulting ideas of creation and re-creation attributed divine or metaphysical qualities to creative processes. The final sections of this chapter are concerned with emblem books and the ways in which they convey meaning. Just like myths, such imagery is at once lucid and obscure, inviting the beholder to engage intellectually.

## Camillo and Quiccheberg

The sixteenth century saw the publication of two influential treatises on the practice of collecting. In the early 1530s, philosopher Giulio Camillo (ca. 1480-1544) created a “theater of eloquence” or memory theater for Francis I (1494-1547), King of France. Although no traces of the actual theater survive, Camillo’s thoughts on its structure and content were published posthumously in *L’idea del Theatro* (Florence and Venice: 1550).<sup>286</sup> The theater is actually described as an amphitheater, derived from the ancient Greek *amphitheatron* or “a place for viewing from all sides.”<sup>287</sup>

A contemporary eyewitness remarked that its wooden structure was big enough to admit two spectators, enabling them “to discourse on any subject no less fluently than Cicero.”<sup>288</sup> This can be taken quite literally, since the structure is known to contain images with drawers underneath in which Ciceronian speeches were kept.<sup>289</sup>

In 1565, Samuel Quiccheberg (1529-1567), a physician born in Antwerp, published a treatise entitled *Inscriptiones vel Tituli Theatri Amplissimi* (1565) while he was active at the Munich court. His *Inscriptiones* offers practical guidelines for the assembly of a cabinet of curiosities or *Kunstwunderkammer*, which he also called a *theatrum sapientiae* or theater of wisdom.<sup>290</sup> In English, the full title reads as follows.

Inscriptions or Titles of the Most Ample Theater that Houses Exemplary Objects and Exceptional Images of the Entire World, so that One Could also Rightly Call It a: Repository of artificial and marvelous things, and of every rare treasure, precious object, construction, and

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<sup>286</sup> Bolzoni, “Théâtres de Mémoire”; Hooper-Greenhill, *Museums*, 97–98.

<sup>287</sup> de Bruijn, “From Text to Theatre,” 368.

<sup>288</sup> Yates, *The Art of Memory*, 130–31.

<sup>289</sup> Yates, 144 & 166.

<sup>290</sup> Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 2 & 58–59.

picture. It is recommended that these things be brought together here in the theater so that by their frequent viewing and handling one might quickly, easily, and confidently be able to acquire a unique knowledge and admirable understanding of things.<sup>291</sup>

The theater, as a place for seeing, is introduced here as a materialized *thesaurus sapientiae*, containing objects and images of wonder and artifice. According to this treatise, looking at and interacting with this collection is central to the acquisition of knowledge.

In *L'Idée del Teatro*, the theater is presented as a semicircular structure that rests on seven pillars, referring to the seven columns of Solomon's House of Wisdom.<sup>292</sup> The symbolic number seven recurs frequently: the spectator takes central stage in the theater, and seven levels rise up in front of the viewer, divided by seven gangways (representing the seven planets), each of them equipped with seven gates.<sup>293</sup> The appropriation of the Vitruvian theater was noticed by Quiccheberg, who referred to Camillo's theater of eloquence as a *museo* or research site.<sup>294</sup> The theaters of both Camillo and Quiccheberg are grounded in the art of rhetoric and present "an ideal system of [the] universal cataloguing" of visualized knowledge in memory.<sup>295</sup>

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<sup>291</sup> Quiccheberg, Meadow, and Robertson, 60–61. The full title in Latin: *Inscriptiones vel Tituli Theatri Amplissimi, complectentis rerum vniuersitatis singulas materias et imagines eximias : ut idem recte quoq[ue] dici possit, promptuarium artificiosarum miraculosarumq[ue] rerum, ac omnis rari thesauri et pretiosae supellectilis, structurae atq[ue] picturae : quae hic simul in theatro conquiri consuluntur, ut eorum frequenti inspectione tractationeq[ue], singularis aliqua rerum cognitio et prudentia admiranda, citò, facilè ac tutò comparari possit.*

<sup>292</sup> Bolzoni, *The Gallery of Memory*, 195; de Bruijn, "From Text to Theatre," 357 & 368 (note 1). "'Wisdom has built her house' and founded it upon seven columns," Proverbs 9:1, as quoted in Bolzoni, "Visualization of a Universal Knowledge," 53. Proverbs is characterized as a "collection of collections" in Dunn and Rogerson, *Eerdmans Commentary on the Bible*, 438. The House of Wisdom is also represented symbolically on the title page [Fig. 200] of Robert Recorde's *The Castle of Knowledge* (London: 1556).

<sup>293</sup> Yates, *The Art of Memory*, 136–37; Hooper-Greenhill, *Museums*, 98.

<sup>294</sup> Kuwakino, "The Great Theatre of Creative Thought," 306 & 312–13; Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 25.

<sup>295</sup> Bolzoni, *The Gallery of Memory*, 236 & 247. See also Yates, *The Art of Memory*, 143–44; Kuwakino, "The Great Theatre of Creative Thought," 316.

Quiccheberg's theater is to be understood as a grand building with high stories surrounding a garden or inner courtyard. This shows a significant correlation with the construction of the Munich *Kunstammer*, built between 1563 and 1567 (exterior) and completed in 1578 (interior).<sup>296</sup> The acquisition and organization of objects and images in Quiccheberg's theater of wisdom served to stimulate learning and to increase knowledge, thereby producing knowledge as well as an expert viewer.<sup>297</sup> His collectibles are divided in five classes, and further subdivided in fifty-three *inscriptions*. Referring to Cicero, Quiccheberg comments that this universal list enables men to acquire knowledge in all domains of human enquiry.<sup>298</sup>

A reference to the wise Solomon, King of Israel, is also included in the *Inscriptions*. Solomon is presented as the leading exemplar for the collector accompanied by a biblical passage from 1 Kings 4:29-34, recounting how God gave to Solomon wisdom, prudence, and breadth of understanding.<sup>299</sup>

Quiccheberg's *Kunstwunderkammer* is incorporated into a larger complex of facilities, some for storage, some for display, and some for production such as workshops and a laboratory for medicines.<sup>300</sup> A library, one of the places for storage, made use of a system of commonplaces (*koinoi topoi* or *loci communes*) for the organization of its contents. Derived from the art of memory, but converted into a physical context, this method applied subject headings to indicate where to find specific topics within books, as well as to arrange large amounts of literary knowledge within the library itself. Rhetorical

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<sup>296</sup> Pilaski, "The Munich Kunstammer," 2–3.

<sup>297</sup> Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, xi & 6.

<sup>298</sup> Kuwakino, "The Great Theatre of Creative Thought," 307.

<sup>299</sup> Hooper-Greenhill, *Museums*, 89; Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 1–2 & 103–4.

<sup>300</sup> Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 26–27 & 58; Kuwakino, "The Great Theatre of Creative Thought," 306.

tools were thus transformed to organize textual information and to manage the objects that contain this information.<sup>301</sup>

In addition to objects, which in this period became closely connected with knowledge,<sup>302</sup> images fulfilled an equivalent function. An example of one of Quiccheberg's places for display is the portrait gallery, whereas an example of a place for production is the printing workshop. The images collected and created in the *Kunstwunderkammer* and associated facilities were thought to stimulate the intellect. According to Quiccheberg, "solely from these images it appears possible to acquire knowledge of many subjects, for the observation of a single image makes a greater impression in the mind than the daily reading of many pages [of text]."<sup>303</sup>

#### Collections of pictures

In the Renaissance, images or pictures were included in the Greek ideal of *enkyklios paideia* or all-round education. Ulisse Aldrovandi (1522-1605) of Bologna was one of the prominent scholars who published illustrated catalogues based on his own collection. Aldrovandi was praised as the Pliny of his time, as well as the Bolognese Aristotle, and had collected 12,000 different things (*cose*) in his attempt to rival the 20,000 noteworthy things (*res*) recorded in the *Naturalis Historia*.<sup>304</sup> About 1,500 years after Pliny finished his encyclopedic collection, new catalogues of natural history started to emerge modeled on his work. The first printed

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<sup>301</sup> Kuwakino, "The Great Theatre of Creative Thought," 311.

<sup>302</sup> Kolb, *Jan Brueghel the Elder*, 21.

<sup>303</sup> Samuel Quiccheberg, *Inscriptiones, E4r-E4v: Digressions, On the Fifth Class, Images Stamped from Copper: for Inscription 3*, quoted in Jansen, *Jacopo Strada and Cultural Patronage*, 132.

<sup>304</sup> Findlen, *Possessing Nature*, 23; Kraemer and Zedelmaier, "Instruments of Invention," 325–26. Findlen's *Possessing Nature: Museums, Collecting, and Scientific Culture in Early Modern Italy* of 1994 is one of the most influential books on the topic of early modern collections. Although focused on Italy, many of its findings ring true for the (Spanish) Habsburg Netherlands as well, not in the least because of the high degree of exchange between the regions.

edition of the *Naturalis Historia* appeared in Venice in 1469, and within one hundred years no less than forty-six editions were printed in Latin and vernacular languages.<sup>305</sup>

Quiccheberg was probably familiar with Pliny and certainly familiar with Aldrovandi's collection, which he reports to have visited while he was still a young man.<sup>306</sup>

In his digressions and clarifications on the third class, inscription 1 (marvelous animals), Quiccheberg asks "who would not have wished to help Conrad Gessner in collecting animals, or Leonhard Fuchs in depicting the species of plants, or Georg Agricola in describing metals, or others in other pursuits, should some possibility of helping such a collector have occurred?"<sup>307</sup> Conrad Gessner (1516-1565) is best known for his monumental publication *Historia animalium* (Zurich: 1551-1558), categorized according to Aristotle's taxonomies and richly illustrated.<sup>308</sup> It is significant to note that two additional editions were produced containing mainly the woodcut illustrations and almost no text – the *Icones animalium* (Zurich: 1553 and 1560) and the *Icones avium* (Zurich: 1555 and 1560).

Leonhard Fuchs (1501-1566) gained renown for his *De historia stirpium* (Basel: 1542), of which a Dutch edition emerged in 1543. In this botanical treatise he emphasized the usefulness of adding images to the text, and even added portraits of the illustrators to the penultimate page of his book [Fig. 256].

Who in his right mind would condemn pictures which can communicate information much more clearly than the words of even the most eloquent men? Those things that are

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<sup>305</sup> Kolb, *Jan Brueghel the Elder*, 24.

<sup>306</sup> Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 11.

<sup>307</sup> Quiccheberg, Meadow, and Robertson, 81.

<sup>308</sup> Kusukawa, "The Sources of Gessner's Pictures," 304; Egmond, "A Collection within a Collection," 151. Aristotle's categorization consists of viviparous quadrupeds, oviparous quadrupeds, birds and aquatic animals.

presented to the eyes and depicted on panels or paper become fixed more firmly in the mind than those that are described in bare words.<sup>309</sup>

Georg Agricola (1494-1555), lastly, is famous for his *De re metallica* (Basel: 1556), and equally felt the need to include illustrations. As he explained, it is necessary to hire illustrators because

descriptions which are conveyed by words should either not be understood by men of our own times, or should cause difficulty to posterity, in the same way as to us difficulty is often caused by many names which the Ancients [...] have handed down to us without any explanation.<sup>310</sup>

These quotes clearly illustrate the newly acquired significance of images in sharing and communicating knowledge.

Wisdom and eloquence

In a sense it could be said that together Camillo's theater of eloquence and Quiccheberg's theater of wisdom represent the figure of Hermathena, with Hermes as the god of

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<sup>309</sup> Preface to *De historia stirpium* (Paris: 1543), as quoted in Smith and Findlen, *Merchants & Marvels*, 8. Original text in Latin: "quis quaso sanae mentis picturam contemneret, quam constat res multo clarius exprimere, quàm verbis ullis, etiam eloquentissimorum[m], deliniari quant. Et quidem natura sic comparatum est, ut pictura omnes capiamur: adeoque[ue] altius animo insident quae in tabulis aut charta oculis exposita sunt et depicta, quàm quae nudis verbis describuntus." <https://cudl.lib.cam.ac.uk/view/PR-SEL-00002-00081/19> (xvii); <https://archive.org/details/Dehistoriastirp00Fuch/page/n17/mode/2up> (both accessed March 11, 2021).

<sup>310</sup> Preface to *De re metallica* (1556), as quoted in Smith, *The Body of the Artisan*, 2004, 150. Original text in Latin: "non modo descripsi, sed etiam mercede conduxì pictores ad earum effigies exprimendas: ne res, quae verbis significantur, ignotae aut huius aetatis hominibus aut posteris percipiendi di difficultatem asserant: ut nobis non pauca vocabula asserre solent, quae veteres (quia res errant omnibus notae) nuda ab enodatione prodiderunt." [https://archive.org/details/gri\\_000033125008455038/page/n9/mode/2up](https://archive.org/details/gri_000033125008455038/page/n9/mode/2up) (last page of the Epistola) (accessed March 11, 2021).

Eloquence (*oratio*) and Athena the goddess of Wisdom (*ratio*).<sup>311</sup> The Hermathena is a type of sculpture and it is known that such a double bust was once part of the collection of Cicero, whose works largely inspired these two early modern “theaters.” In his *Letters to Atticus*, Cicero expressed his admiration for this sculpture and remarked that “Hermes is the common emblem of all such places [*gymnasi* or academies] and Minerva is special to me.”<sup>312</sup>

Achille Bocchi (1488-1562) must have been aware of this bust when he designed a Hermathena meant to adorn his Academy in Bologna. An image [Fig. 250] of it has been preserved in his emblem book *Symbolicarum quaestionum de universo genere* (Bologna: 1555).<sup>313</sup> Bocchi was acquainted with Camillo, to whom he dedicated one of the emblems, while Aldrovandi was one of Bocchi’s pupils.<sup>314</sup>

Marsilio Ficino (1433-1499) had preceded Bocchi by roughly a century in choosing the Hermathena as the symbol that best represented the ideals of the Academy led by him in Florence.<sup>315</sup> This Neoplatonic institution was sponsored by Cosimo de’ Medici (1389-1464) and modeled on Plato’s Academy. In a similar vein the Hermathena was considered to be “the greatest adornment” by Gian Paolo Lomazzo (1538-1592), who modelled his *Idea del tempio della pittura* (Milan: 1590) on Camillo’s *L’Idea del Teatro*.<sup>316</sup>

The Hermathena also found its way to the court of Rudolf II (1552-1612), Holy Roman Emperor, in whose service the Antwerp-born artist Joris Hoefnagel (1542-1601) was active during the last decade of his life. The print *Cursus* [Fig. 130] was commissioned and published by Hoefnagel with the privilege of Rudolf II, and made by Aegidius Sadeler II after

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<sup>311</sup> Rolet, “The Taming of the Lion,” 482.

<sup>312</sup> Bounia, *The Nature of Classical Collecting*, 293; Zenkert, “The Owl and the Birds,” 568.

<sup>313</sup> Rolet, “The Taming of the Lion,” 477.

<sup>314</sup> Packwood, “Socrates Becomes Narcissus,” n.p. Bocchi dedicated *Symb. LXXXVI* to Camillo.

<sup>315</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 195.

<sup>316</sup> Kemp, “Lomazzo, Giovanni Paolo,” n.p.; Díaz Padrón and Royo-Villanova, *David Teniers*, 195. The Hermathena is mentioned in Lomazzo’s *Trattato dell’arte de la pittura, scoltura et architettura* (Milan: 1584).

a design by Hans von Aachen.<sup>317</sup> The print is crowned with the inscription “*Hermathena*” and the two deities are shown in an embrace. Behind Athena we see Pegasus taking off and Perseus decapitating Medusa: this head adorns Athena’s shield. To her left an owl rests on a book, of which the cover reads “*Nis sine vita nihil*” (nothing lives without an end) with underneath the inscription “*Me duce pervenies*” (With me as a guide you will perfect yourself).<sup>318</sup>

Behind Hermes [Fig. 130] we see the Muses, nine in total, making music at Mount Helicon. The Hippocrene is indicated by Pegasus who touches the mount where the spring starts to flow. Hermes holds his caduceus and is accompanied by a cock with underneath the inscription “*Tu modo progredere*” (By yourself, you only progress).<sup>319</sup> These inscriptions are also included in *Symbolum CII* of Bocchi’s *Symbolicarum* [Fig. 250] that exemplifies that “Modesty brings to completion Wisdom, progress Eloquence; this one god(dess) perfects happiness.”<sup>320</sup> This print, along with the other two in the series, refers strongly to Cicero who argued that the intellectual life should play a prominent role in life, but that the wise man in search for happiness should also leave room for the goods of the body (*Praemium*) and the goods of fortune (*Occasio*).<sup>321</sup>

Around the same time (1593), Hoefnagel created a small painting for his friend Abraham Ortelius (1527-1598) representing another Hermathena [Fig. 254]. This time we do not see the gods themselves depicted, but rather their attributes. The owl represents Athena, whereas the caduceus in the form of a paintbrush – rather than a staff – entwined

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<sup>317</sup> *Cursus* is part of the three-part series *Properties for a Successful Life*, together with *Occasio* (1/3) and *Praemium* (3/3). *Cursus* (2/3) or career is characterized as a an “*Ornamentum in prosperis*” (ornament in prosperity) and a “*Refugium in adversis*” (refuge in adversity).

<sup>318</sup> Watson, *Achille Bocchi*, 143.

<sup>319</sup> Watson, 143.

<sup>320</sup> Watson, 144. Original in Latin: *sapientiam modestia, progressio eloquentiam, felicitatem haec perficit*.

<sup>321</sup> Rolet, “The Taming of the Lion,” 487. See note 317.

by two serpents represents Hermes. The blue label underneath reads “*Hermathena*.” The cartouche above the owl with caduceus, however, conveys a remarkably different message. The inscription reads “*Ars neminem habet osorem nisi ignorantem*” (art has no enemy except the ignorant).<sup>322</sup> The contrast between wisdom and ignorance (its correlative) had already been pointed out by Aristotle: “it was to escape ignorance that men studied philosophy.”<sup>323</sup>

## Knowing the universe

The philosophy of Aristotle was well known in the early modern period. His conception of memory was not only associated with the capacity to learn, it also came to be seen as one of the five wits. In addition to the five outward wits (the five senses necessary for perception or *aisthesis*), the five inward wits were conceptualized as common wit (or common sense), imagination, fantasy, estimation, and memory.<sup>324</sup> These mental or noetic faculties (from *nous*) were already described in *De anima* (ca. 350 BC) and formed the basis for thoughts on psychology from the Middle Ages onwards.<sup>325</sup> In this understanding, the outward sense impressions are transmitted to the common sense, and from there to the other faculties.<sup>326</sup>

Both the outward and inward wits can be found in the synoptic table entitled the *Ordo Universi et humanarum scientiarum prima monumenta* (Antwerp: 1585) [Fig. 251].<sup>327</sup>

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<sup>322</sup> Zenkert, “The Owl and the Birds,” 568.

<sup>323</sup> Aristotle, *Metaphysics*, 1.982b.

<sup>324</sup> Nussbaum and Rorty, *Essays on Aristotle*, 362; Marr, “Ingenuity and Discernment,” 120; Neer, *The Emergence of the Classical Style*, 64.

<sup>325</sup> Nussbaum and Rorty, *Essays on Aristotle*, 363. Imagination was thought to be a passive, and fantasy an active, faculty. Clark, *Vanities of the Eye*, 62. Estimation is something like “instinct.” Carruthers, *The Book of Memory*, 65.

<sup>326</sup> Muller, “Rubens’s Theory,” 246.

<sup>327</sup> For an extensive discussion of this print, see Saffrey, “L’Homme-Microcosme.” The title translates as “The order of the universe and first memorials of the human sciences,” see Berger, *The Art of Philosophy*, 20.

This comprehensive table teaches the Aristotelian doctrine of the order of the world, starting with the triad *Deus* (God) – *Hyle* (Matter) – *Mens* (Intellect).<sup>328</sup> In other words, this triad refers to God, the universe (or nature) and man, or alternatively God, the macrocosm and the microcosm. The inclusion of god in this scheme deserves some explanation. As we have seen, theology formed part of Aristotle’s philosophy. His *primum mobile* or Prime Mover would be equated with the Christian God from the thirteenth century onwards.<sup>329</sup> Scholastic authors such as Thomas Aquinas (1225-1274) thus reconciled Aristotelian and Christian world views.<sup>330</sup>

The *Ordo Universi* [Fig. 251] was invented by Natale Bonifacio at the request of physician and philosopher Andrea Bacci (1524-1600). Both Bacci and his mecenas Giacomo Boncompagni, son of pope Gregory XIII who founded the final seat of the Roman College, had ties with the Society of Jesus. As such the contents of the print were sanctioned by the Jesuits, who also had a strong presence in Antwerp (see chapter 7). In Antwerp Adriaan Huybrechts I copied the print, which was subsequently published by printer and cartographer Gerard de Jode (ca. 1516-1591). The five wits are included and described in detail in this print.

Underneath the enumeration of the external and internal senses in the *Ordo Universi* [Fig. 251] the prominence of the sense of sight is stressed, and the final pear-shaped frame emphasizes that for man alone the sensory act leads to the acquisition of knowledge (*ad scientiarum acquisitionem*).<sup>331</sup> To the left, the importance of the sense of sight in relation to cognition is highlighted once more under the heading *visus excellentia*, with implicit

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<sup>328</sup> See the cartouche in the lower left corner addressing the reader (“*studiose lector*”).

<sup>329</sup> Aristotle, *Metaphysics*, 12.1072b; Grant, *Planets, Stars, and Orbs*, 519.

<sup>330</sup> Nouhuys, *The Age of Two-Faced Janus*, 95–96.

<sup>331</sup> Saffrey, “L’Homme-Microcosme,” 117.

reference to the *Metaphysica* about how sight reveals many distinctions.<sup>332</sup> These statements about the link between the senses and knowledge are repeated at the bottom left of the synoptic table, under *sensus ad scientias*.

In addition, we see a list of Aristotle's five forms of true knowledge, or the five virtuous attitudes acquired in the mind as they are labeled in this table at the bottom center: wisdom (*sapientia*), understanding or insight (*intellectus*), prudence (*prudentia*), knowledge (*scientia*), skill or art (*ars*). Underneath this enumeration the table culminates with the following sentence.

*Quas omnes scientias atque animi habitus complectitur ENKYKLOPAIDIA et quae est omnium humanarum ac divinarum rerum sapientia perficit EVANGELIUM ad summam foelicitatem et summum finem, inconniventibus oculis.*

All knowledge and attitudes of the soul are included in the Greek *enkyklios paideia* and the wisdom of all human and divine things perfects the Gospel, to be seen with “unblinking eyes.” The classical notion that to know something means to see something was undoubtedly known to early modern scholars and artists in Europe. Imagery, learning and theology were thus closely related.

*Mundus sensibilis and mundus intelligibilis*

The external senses, especially the sense of sight, pertain to the sensory world of (physical) perception by the body or the *mundus sensibilis*, while the internal senses pertain to the

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<sup>332</sup> <https://gallica.bnf.fr/ark:/12148/btv1b55002353x/f1.item.zoom> (accessed August 26, 2020); Aristotle, *Metaphysics*, 1.980a.

intelligible world of (metaphysical) perception by the mind or the *mundus intelligibilis*.<sup>333</sup> An illustration of this division features prominently in the title page of Francis Bacon's (1561-1626) posthumously published *Of the Advancement and Proficiency of Learning* (Oxford: 1640). This is the English translation of Bacon's *De augmentis scientiarum* of 1605. In the top corners of the title page [Fig. 197] we see two globes, one of them labeled *mundus visibilis* (rather than *sensibilis*) and the other *mundus intellectualis* (rather than *intelligibilis*). The two globes are connected by means of a handshake, symbolically linking *ratio* (reason) with its role "to abstract notions from these [sense] impressions" and *experientia* (experience) as a "way of approaching nature that is the most beneficial to the mind."<sup>334</sup>

At the bottom of the title page [Fig. 197] the same division is maintained. Underneath the *mundus visibilis*, the left pillar rests on *scientiae*. Bacon conceptualizes these in a triangle as *ratio / philosophia – memoria / historia – imaginatio / poesis*. Underneath the *mundus intellectualis*, the right pillar rests on *philosophiae*. These are subdivided into *deus / divina – natura / naturalis – homo / humana*, the by now familiar triad of God, nature and man.<sup>335</sup> The two triangles are flanked by owls, Athena's attribute, holding candles. The candle on the left represents visible light, the one on the right intellectual light.<sup>336</sup> The aim of the method proposed by Bacon is to acquire a renewed capacity to see the real "Ideas of the World" or a "true vision of the impressions and signets of the Creator, upon the Creature."<sup>337</sup>

Bacon presented his vision on learning as a fictive *Kunstkammer* in the introduction to his unfinished *Instauratio Magna*, the first part of which is *Of the Advancement and*

<sup>333</sup> Scheller, "Rembrandt En de Encyclopedische Kunstkamer," 112.

<sup>334</sup> Corneanu and Vermeir, "Idols of the Imagination," 185 & 193.

<sup>335</sup> On Bacon's Aristotelian background, see for example Pesic, "Francis Bacon."

<sup>336</sup> Bacon, *Of the Advancement*, 38 (preface).

<sup>337</sup> Bacon, 38 (preface); Corneanu and Vermeir, "Idols of the Imagination," 186; Bacon, Rees, and Wakely, *The Instauratio Magna. Part 2*, 45.

*Proficiency of Learning*.<sup>338</sup> A few years prior, in the *Gesta Grayorum* of 1594, Bacon already described the creation of such a “*Cabinet of knowledge*.”<sup>339</sup> The four means to further learning are identified as the “collecting of a most perfect and general library,” building a garden for cultivating plants with adjoining menagerie as “a model of the universal nature made private,” creating a cabinet to house artful objects made by both nature of man, and lastly a “still-house” or laboratory for carrying out experiments.<sup>340</sup> His model was created in Elizabethan England, but reminiscent of the Munich and Prague *Kunstammern*.<sup>341</sup>

### Bacon and the imagination

In Bacon’s view, the imagination governs poetry which results in the fanciful imitation of things.<sup>342</sup> The Renaissance imagination has been characterized as “a complex and shifting historical product resulting from the accretion of several traditions of thought, mainly Aristotelian and Platonic, but also Stoic.”<sup>343</sup> For both Aristotle and Stoics, *phantasia* referred to “things which we can represent to ourselves.”<sup>344</sup> Subsequently this concept was translated as imagination and incorporated into faculty psychology as one of the five wits.<sup>345</sup> Pliny’s work was yet another influence on Bacon, as evidenced by such statements as that discoveries “are not conceived possible before they are made” and that some things lie “well off the beaten track of fancy.”<sup>346</sup>

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<sup>338</sup> Bredekamp, *Antikensehnsucht und Maschinenglauben*, 63; Bacon, Rees, and Wakely, *The Instauration Magna. Part 2*, 38–39; Bacon, *Of the Advancement*, 32–33 (preface).

<sup>339</sup> E.g. Bacon, *Of the Advancement*, 330 (book VI).

<sup>340</sup> Impey and MacGregor, *The Origins of Museums*, 1 & 220; Bacon, Stewart, and Knight, *Early Writings*, chapter 18.

<sup>341</sup> Bredekamp, *Antikensehnsucht und Maschinenglauben*, 63–64.

<sup>342</sup> Corneanu and Vermeir, “Idols of the Imagination,” 189.

<sup>343</sup> Corneanu and Vermeir, 187.

<sup>344</sup> Nussbaum and Rorty, *Essays on Aristotle*, 305.

<sup>345</sup> Corneanu and Vermeir, “Idols of the Imagination,” 188.

<sup>346</sup> See the previous chapter, and Pliny, *The Natural History*, 1.dedication & 7.1; Corneanu and Vermeir, “Idols of the Imagination,” 193.

Rhetorical persuasion was of interest to Bacon. “In finding the correct way to portray the world the imagination is transformed into reason’s main tool for the acquisition of knowledge: ‘In all persuasions that are wrought by eloquence and other impressions of nature, which do paint and disguise the true appearance of things, the chief recommendation unto Reason is from the Imagination.’”<sup>347</sup> This quote again highlights the importance of vision and its relation to words or “notes of things” that are compared to coins of intellectual things – “as Money may be made of other matter besides Gold and Silver; so there may be stamped other *Notes* of things besides *Words* and *Letters*.”<sup>348</sup>

## Inspiration for artists

The aforementioned conception of imagination and memory as visual faculties contributed significantly to early modern art theory.<sup>349</sup> The storehouse as a metaphor for memory in general, and for the memory of the artist in particular, was already taken up by Albrecht Dürer (1471-1528) in book 3 of his *Vier Bücher von Menschlicher Proportion* (Nuremberg: 1528). In the postscript he wrote that “The mind of artists is full of images that they might be able to produce.”<sup>350</sup> Such images were thought to be the basis for artistic creation.

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<sup>347</sup> Quote (partly by Bacon) taken from Chen-Morris, “Imagination, Passions, and the Production of Knowledge,” 70.

<sup>348</sup> Bacon, *Of the Advancement*, 260. See also the *tabula* of book VI, entitled “The Platform of the Designe.”

<sup>349</sup> Muller, “Rubens’s Theory,” 245.

<sup>350</sup> Berger, *The Art of Philosophy*, 178. The full quote can be found on fol. T1r: “*Es ist auch kein wunder das ein künstlicher meyster mancherley vnderschieden der gestalt betracht die er all künt machen / so er zeyt gnug darzu het der halb er solchs sten muß lassen / dann solch zufel sind bey den künstnern vnzelich vil vnd jr gemüt voller bildnuß das jn möglich zu machen wer / der halb so eim menschen vil hundert jar zu leben verlihen wirdet der sich solcher kunst schickerlich brauchte / vnd darzu genaturt der wirdet durch die krafft die Gott dem menschen geben hat / alle tag vil newer gestalt der menschen vnd andrer creaturen auß zu giessen vnd zu machen haben / das man for nit gesehen noch ein ander gedacht het.*” See also Parshall, “Graphic Knowledge,” 398 & 409 (note 21).

Collectively, the internal senses were regarded as necessary for the “reception, retention and recombination of images.”<sup>351</sup>

The ancient rivalry between the textual and pictorial arts (see chapter 4) was again a common trope in the sixteenth and seventeenth centuries.<sup>352</sup> An anecdote in *De Inventione* (written prior to 55 BC) by Cicero, who associated the act of painting with the process of forming mental images, illustrates the convergence of the two arts. When Zeuxis was asked to create a painting of Helen of Troy, a woman who surpassed all others in beauty, he did so by combining the features of the five most beautiful maidens of Croton.<sup>353</sup> This process is referred to as *inventio* or the stage of composition in rhetorical training.<sup>354</sup> Both the imitation of nature and ingenious combination of images would become the measure of artistic success.

#### Imitation and ingenuity

Pliny's *Naturalis Historia* served as a major source for inspiration, not only for collectors like Aldrovandi but also for early modern artists and authors. Pliny had devoted considerable parts of his volume, especially books 33 to 36, to Greek and Roman art and this did not go unnoticed.<sup>355</sup> The story of Pausias and Glycera, for example, seems to have been a source of inspiration for an artist like Jan Brueghel I. He invented a new type of painting with a garland surrounding an icon or scene, which was often executed in collaboration with another

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<sup>351</sup> Marr, “Ingenuity and Discernment,” 120.

<sup>352</sup> Not to be confused with the *paragone*, the rivalry between painting and sculpture. *Parergon*, on the other hand, is a pictorial supplement, defined by Quintilian as an adornment, according to Franciscus Junius. Wood, “‘Curious Pictures’,” 344.

<sup>353</sup> Cicero, *De Inventione*, via Dundas, “Franciscus Junius,” 161–62. See also Plin. Nat. 35, via Carey, *Pliny's Catalogue of Culture*, 106.

<sup>354</sup> Carruthers, *The Book of Memory*, 243–44.

<sup>355</sup> Carey, *Pliny's Catalogue of Culture*, 7–8.

artist.<sup>356</sup> See for example the *Virgin and Child in a Garland of Flowers* by Brueghel I and Peter Paul Rubens as depicted in the *Allegory of Sight* [Cat. No. 17]. This and other stories by Pliny were included in *Het Schilder-Boeck* by the Flemish Karel van Mander (1548-1606).<sup>357</sup>

*Het Schilder-Boeck* (literally: *The Painter-Book*) appeared in Haarlem in 1604. Its opening line emphasizes that the “*seer vermaecklijcke vernuft-barende edel Schilder-const, natuerlijcke Voedster van alle deughtsaem Consten en wetenschappen [is].*”<sup>358</sup> *Het Schilder-Boeck* was the northern European counterpart of Giorgio Vasari’s (1511-1574) *Le Vite de’ più eccellenti pittori, scultori, ed architettori* (Florence: 1550).<sup>359</sup> *Le Vite* itself, known in English as *The Lives of the Most Excellent Painters, Sculptors, and Architects*, was modelled on Diogenes Laërtius’ *Vitae Philosophorum* (ca. 200-250 AD), also known as the *Lives and Opinions of Eminent Philosophers*.<sup>360</sup> In *Het Schilder-Boeck*, the biographies of Italian painters (part 3) are based on Vasari’s *Le Vite*, whereas the part on ancient painters (part 2) is an almost literal reflection of those treated in book 35 of Pliny’s *Naturalis Historia*.<sup>361</sup>

That Antwerp artists took their inspiration for pictorial genres from Pliny’s work, perhaps through van Mander’s *Het Schilder-Boeck* in the vernacular, is furthermore attested by the emergence of new genres such as the insect studies by Jan van Kessel I (1626-1679). See for example the study of *Insects, Flowers, Mouse, Amphisbaena and Mandrake* on a white background that van Kessel I contributed to *A Cabinet of Pictures* [Cat. No. 11]. Pliny

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<sup>356</sup> Honig, *Jan Brueghel*, 61.

<sup>357</sup> Van Mander, *Het Schilder-Boeck*, part 2, fol. 73r; Baadj, *Jan van Kessel I*, 42.

<sup>358</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4r. English translation: “very entertaining, ingenuity-bearing, noble art of Painting [is the] natural Nourisher of all virtuous Arts and sciences.”

<sup>359</sup> For the first edition of 1550, see [https://archive.org/details/gri\\_vitedepivecc01vasa/page/n3/mode/2up](https://archive.org/details/gri_vitedepivecc01vasa/page/n3/mode/2up); for the second edition of 1568 (revised, expanded and illustrated), see <https://archive.org/details/levitedepiveccel01vasa/page/n3/mode/2up> (both accessed September 29, 2020). Both were dedicated to Cosimo I de’ Medici (1519-1574), Grand Duke of Tuscany.

<sup>360</sup> D. L. 1.prologue, available via <http://data.perseus.org/citations/urn:cts:greekLit:tlg0004.tlg001.perseus-eng1:1.prologue> (accessed September 29, 2020).

<sup>361</sup> See “(1) Karel van Mander I” in Reznicek and Stompé, “Mander, van Family,” n.p.

discussed insects in the first chapter of book 11, which opens with the “extreme smallness of insects.”<sup>362</sup> In this chapter, nature is not the inspiration for artist, but is itself characterized as an artist *par excellence*.<sup>363</sup> According to Pliny, “in no one of her works has Nature more fully displayed her exhaustless ingenuity” as in insects.<sup>364</sup>

Ingenuity (*ingenium* or genius) is a term Pliny frequently used as an essential attribute of artists.<sup>365</sup> According to both Cicero and Quintilian, memory was a prerequisite for ingenuity.<sup>366</sup> In the Middle Ages and the Renaissance, *ingenium* was also translated as “wit” even though this was also an equivalent of “sense” as we have just seen. Wit was furthermore strongly associated with the imagination.<sup>367</sup> In other languages *ingenium* translates roughly as *geest* in Dutch, *esprit* in French, *ingegno* in Italian and *ingenio* in Spanish.<sup>368</sup> The Antwerp collector Cornelis van der Geest, for example, had the motto “*vive l’esprit*” (long live wit) included in a constcamer painting [Cat. No. 9] representing his collection.<sup>369</sup> In English these notions are all closely related to those of the spirit (*spiritus*) and the mind (*mens*).<sup>370</sup>

The inscription “*vivitur ingenio caetera mortis erunt*” [Fig. 184] or “genius lives on, all else is mortal” can be found in Andreas Vesalius’ (1514-1564) groundbreaking book *De Humani Corporis Fabrica Libri Septem* (Basel: 1543).<sup>371</sup> Similarly, George Wither’s (1588-1667) *A Collection of Emblemes, Ancient and Moderne* (London: 1635) introduces this motto

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<sup>362</sup> Pliny, *The Natural History*, 11.1.

<sup>363</sup> Carey, *Pliny’s Catalogue of Culture*, 134; Bredekamp, *Antikensehnsucht und Maschinenglauben*, 73.

<sup>364</sup> Pliny, *The Natural History*, 11.1. Nature is furthermore said “nowhere to be seen to greater perfection than in the very smallest of her works.”

<sup>365</sup> Carey, *Pliny’s Catalogue of Culture*, 134–35.

<sup>366</sup> Muller, “Rubens’s Theory,” 245.

<sup>367</sup> Corneanu and Vermeir, “Idols of the Imagination,” 190.

<sup>368</sup> Marr et al., *Logodaedalus*.

<sup>369</sup> Marr, “Ingenuity and Discernment,” 108–9.

<sup>370</sup> Corneanu and Vermeir, “Idols of the Imagination,” 190.

<sup>371</sup> This print would have made a wonderful addition to Vázquez Manassero, *El “Yngenio” en Palacio*.

in the very first emblem of the book [Fig. 185]. The first illustrated edition of the *Iconologia* (Rome: 1603, first unillustrated publication in 1593) by Cesare Ripa (ca. 1560-1622) includes both descriptions and emblems how to depict immaterial concepts such as *ingegno* or genius, which was included from 1603 onwards.<sup>372</sup> Ripa's allegories are ordered alphabetically and offer a repertoire of symbolic images based on both classical and contemporary texts.<sup>373</sup>

Ripa's method of visual definition is rooted in the Aristotelian theory of definition, which includes the application of logical analysis to establish verbal definitions.<sup>374</sup> As Aristotle had posed in his *Metaphysica*, "definition refers to the universal and the form."<sup>375</sup> Ripa considers it essential to add a name to each allegory, unless they are enigmas, "because without the knowledge of the name one cannot penetrate the cognition of the thing meant."<sup>376</sup> It is interesting to note that *imaginatione* or imagination is not included in the earlier editions of the *Iconologia* – this allegory makes its first appearance in the edition of 1625.<sup>377</sup> The concept of *imitatione* or imitation was part of the repertoire from the start, while only from 1625 onwards it is accompanied by an emblem [Fig. 259]. Imitation is personified as a woman with brushes in her right hand, a mask in her left hand and a monkey at her feet.<sup>378</sup>

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<sup>372</sup> For *ingegno*, see Ripa, *Iconologia*, 220–21.

<sup>373</sup> <http://limes.cfs.unipi.it/allegorieripa/iconologia/> (accessed September 30, 2020).

<sup>374</sup> Gombrich, "Icones Symbolicae," 183.

<sup>375</sup> Aristotle, *Metaphysics*, 7.1036a.

<sup>376</sup> Ripa, *Iconologia*, \*3v (proemio). Original in Italian: "Et mi par par cosa da osservarsi il sottoscrivere i nomi, eccetto quando devono essere in forma d'Enigma, perche senza la cognitione del nome non si puo penetrare alla cognitione della cosa significate, si non sono Imagini triviali, che per l'uso alla prima vista da tutti ordinariamente si riconoscono."

<sup>377</sup> For *imaginatione* (1625), see <https://archive.org/details/dellanovissimaic01ripa/page/308/mode/2up> (accessed September 30, 2020).

<sup>378</sup> For *imitatione* (1593), see <https://archive.org/details/iconologiaoverod00ripa/page/126/mode/2up> (accessed September 30, 2020). For the illustration of *imitatione* (1625), see <https://archive.org/details/dellanovissimaic01ripa/page/308/mode/2up> (accessed September 30, 2020).

## Re-creation

The imitation of nature, and especially the representation of man (created in God's image), granted a divine quality to artistic creation, especially in Counter-Reformation and Jesuit circles (see chapter 7).<sup>379</sup> As such, the artist came to be seen as a mediator (similar to Iris) between the divine and the worldly when recreating nature (as a second God) by means of *ingenium* or divine inspiration.<sup>380</sup> Federico Zuccaro (1540/42-1609), tutor of Otto van Veen (see below), formulated such a theory in his *L'Iddea de' Pittori, Scultori, et Architetti* (Turin: 1607). *Disegno* or drawing, characterized by Vasari as the uniting principle of the three Arts (painting, sculpture and architecture), had special significance for Zuccaro, because in his view the word *disegno* was a combination of *Dio* (God) and *segno* (sign).<sup>381</sup>

According to Zuccaro, *disegno* encompasses both the outward wits (*disegno esterno*) and the inward wits (*disegno interno*).<sup>382</sup> In this context, the image as a sign of God was thought to appeal directly to the divine nature of man and thus to bring the beholder mentally closer to God. This abstract notion was illustrated [Fig. 196] and explained by Otto van Veen (ca. 1556-1629), tutor of Rubens (see chapter 8), in the final chapter of his *Physicae et Theologicae Conclusiones* (Orsellis: 1621).<sup>383</sup> In chapter 14, van Veen furthermore presented "the imagination as a creative instrument: just as God created the world using his imagination, so man creates things with his" [Fig. 191].<sup>384</sup>

<sup>379</sup> Meganck, "Rubens on the Human Figure," 62.

<sup>380</sup> Meganck, 62; Clark, *Vanities of the Eye*, 43. Cicero already likened both the natural philosopher and the artist to the *Deus Artifex* or the Great Artist, the divine artificer that created the cosmos. See Meganck, "Rubens on the Human Figure," 55.

<sup>381</sup> Berger, *The Art of Philosophy*, 182; "(2) Federico Zuccaro" in Cheney, "Zuccaro Family," n.p. For an extensive overview of Zuccaro's theory, see Summers, *The Judgment of Sense*, 283–308.

<sup>382</sup> Muller, "Rubens's Theory," 246; Summers, *The Judgment of Sense*, 287.

<sup>383</sup> Van Veen and Smeesters, *Physicae et Theologicae Conclusiones*, 94–95. Orsellis is an unknown location, possibly referring to Brussels. See van Veen and Smeesters, 8–9.

<sup>384</sup> Meganck, "Rubens on the Human Figure," 61–62.

The concept of the mind is furthermore illustrated in an intriguing emblem [Fig. 195] by Willem Hesius (1601-1690) in his *Guilielmi Hesii Antverpiensis à Societate Jesu Emblemata Sacra de Fide, Spe, Charitate* (Antwerp: 1636). The accompanying verses read as follows.

*Minimo exhiberi maximus potest mundus:  
Pila parva caelos claudit intus immensos,  
Capitque quod non concipit. Satis magna est,  
Licet esse nobis mens putetur exilis,  
Si sit Deo fidelis: hac nihil maius,  
Hac mente nihil est amplius; satis numquam  
De mente tanta sentit ille qui credit,  
Mens maior orbe maximo quod humana est.*<sup>385</sup>

The emblem shows a personification of the mind that “captures what cannot be captured” (i.e. immaterial concepts) in the sphere that the winged figure holds. The sphere is a clear reference to the *mundus intelligibilis* and reflects the cross and the sun, symbols of faith and God.<sup>386</sup>

### Emblems and obscurity

Andrea Alciato (1492-1550) is known as the inventor of the emblem genre, and his widely disseminated *Emblemata* (Augsburg: 1531) appeared in numerous editions.<sup>387</sup> Bocchi, a

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<sup>385</sup> Jongh, “Pearls of Virtue,” 74. English translation of these verses by de Jongh: “The vast universe can be shown in something small: / a small globe encompasses endless skies, / and captures what it cannot hold. Our mind is large enough, / though people think it small, / if only it believes in God: nothing can be larger than that mind, / nothing broader than that mind; never can he who believes / appreciate the greatness of this mind, / the mind is larger than the largest sphere because it is human.”

<sup>386</sup> Melion and Ramakers, *Personification*, 468–70.

<sup>387</sup> Watson, *Achille Bocchi*, 19.

friend of Alciato, dedicated one of the emblems in his *Symbolicarum* to the great emblemist, who was also active in Bologna for some time.<sup>388</sup> Emblems generally consist of “an *inscriptio* (either titular or in the form of a motto), a *pictura* (usually pictorial, though sometimes exclusively verbal), and a *subscriptio* (often but not always epigrammatic).”<sup>389</sup> The first emblem [Fig. 249] in Bocchi’s *Symbolicarum*, identified as the third symbol, is accompanied by the *inscriptio* “*Pictura gravium ostenduntur pondera rerum. Quaeq. latent magis, haec per mage aperta patent,*” or “The significance of weighty things is shown by a picture. Whatever is hidden deeper becomes more apparent.”<sup>390</sup>

In *Symb. III* [Fig. 249] art is fused with philosophy, and it shows Socrates seated in front of a picture plane drawing an outline of himself, or rather his inner self. This form of circumscription (*circumscribere*) does not only lead to a picture, but also to self-knowledge. That Socrates is the protagonist makes sense since the Socratic maxim is, “Know Thyself” (*gnoti seauton* in ancient Greek, *nosce te ipsum* in Latin). This maxim was known from its inscription on one of the columns in front of the Temple of Apollo at Delphi and forms an important theme throughout Bocchi’s emblem book.<sup>391</sup> In *Symb. III* Socrates is accompanied by his *daimon* or genius, who aids in the imitation of nature.<sup>392</sup> In addition we read the inscription *eudaimon* that refers to happiness, to a person with a good *daimon*.<sup>393</sup>

The aim of emblem is to make difficult and obscure things understandable by prompting the search for meaning, in a similar vein as the ancients had done.<sup>394</sup> As we have

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<sup>388</sup> <https://archive.org/details/bocchiiBononsymb00bocc/page/82/mode/2up> (accessed September 30, 2020); Watson, 69.

<sup>389</sup> Melion, “The Emblem in Early Modern Europe,” 471. For a comprehensive discussion of the emblem book as symbolic form, see Watson, *Achille Bocchi*.

<sup>390</sup> Packwood, “Socrates Becomes Narcissus,” n.p.

<sup>391</sup> Watson, *Achille Bocchi*, 121.

<sup>392</sup> Watson, 85 & 122–23; Winner, “Die Quellen der Pictura-Allegorien,” 101.

<sup>393</sup> Nightingale, *Spectacles of Truth*, 218; Winner, “Die Quellen der Pictura-Allegorien,” 124.

<sup>394</sup> Watson, *Achille Bocchi*, 84; Vekeman and Müller Hofstede, *Wort und Bild*, xv & 254.

seen, devices such as myths and fables were used to ignite wonder and communicate insights. In *The Wisdom of the Ancients* (London: 1619, first published as *De Sapientia Veterum* in 1609) Bacon set out to reveal the wisdom hidden in classical mythology.<sup>395</sup> Obscurity or *obscuritas* was conceived in a similar way as *curiositas*, and the reception of these notions was informed by the writings of Augustine of Hippo (354-430). Saint Augustine introduced the concept of *docta obscuritas* or learned obscurity, which would become a central element of Christian thought.<sup>396</sup>

Augustine [e.g. Fig. 11] criticized the desire for knowledge for its own sake, as described by Aristotle, on the grounds that “it turned the soul away from the contemplation of eternal matters.”<sup>397</sup> He furthermore condemned the lust of the eyes, that is the insatiability of the eye of the mind (not the eye of the body), which was “made to stand for all knowledge gleaned from the senses.”<sup>398</sup> On the concept of *obscuritas*, however, Augustine agreed with Aristotle that “obscurity can sometimes throw a fresh light on what we know and can thus have a didactic value.”<sup>399</sup>

The obscurity of God’s words challenged the interpreters of the Scripture, who would broaden their intellectual skills in search for its true meaning.<sup>400</sup> No less than four layers of meaning were distinguished by such *exegetes*: the literal, historical meaning (*sensus historicus*), the allegorical sense (*sensus allegoricus*), the moral application of the text (*sensus tropologicus* or *sensus moralis*), and the implicit allusions to secret metaphysical or

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<sup>395</sup> <https://archive.org/details/wisedomeofancien00baco> (accessed September 30, 2020); Bredekamp, *Antikensehnsucht und Maschinenglauben*, 73.

<sup>396</sup> Schiltz and Blackburn, *Music and Riddle Culture*, 54.

<sup>397</sup> Foubert, “Men and Women Tourists’ Desire,” 10.

<sup>398</sup> Daston, “Curiosity in Early Modern Science,” 393; Wood, “‘Curious Pictures’,” 337.

<sup>399</sup> Schiltz and Blackburn, *Music and Riddle Culture*, 54. See Aristotle’s *Ars Rhetorica* (fourth century BC), book I, chapter 11.

<sup>400</sup> Schiltz and Blackburn, 54–55.

eschatological knowledge (*sensus anagogicus*).<sup>401</sup> Biblical interpretation was grounded in Aristotle's *Organon* on logic, from which our modern concept of hermeneutics is derived.<sup>402</sup> Veiled meanings were sought not only in the Bible, but also in ancient poetry and other textual sources.

#### *Ovid's Metamorphoses*

Christian interpretations of the *Metamorphoses*, such as the anonymous French poem *Ovide moralisé* (ca. 1316-1328), circulated widely and were abundantly illustrated.<sup>403</sup> The myths found their way into emblem books, such as Alciato's *Emblemata* and van Veen's *Amorum emblemata* (Antwerp: 1608). A Dutch translation of the *Metamorphoses* by Johannes Florianus (1522-1588), entitled *Metamorphosis dat is: Die herscheppinghe oft veranderinghe*, was first published in Antwerp in 1552, and numerous reprints would follow.<sup>404</sup> As a result, Ovid's histories were an important source for mythological subjects for artists and was labeled by van Mander as "*t'Schilders Bybel*" or the "painter's bible."<sup>405</sup> Just as Cicero had done 1,500 years earlier, myths and fables were still interpreted as containing philosophical truths.<sup>406</sup>

Wonder, curiosity, and obscurity were all seen as important drivers for investigation in the early modern period.<sup>407</sup> The interrelation with travel is furthermore made explicit in van Mander's introduction to the *Wtlegghingh op den Metamorphosis Pub. Ouidij Nasonis*

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<sup>401</sup> Schiltz and Blackburn, 133.

<sup>402</sup> See book 2 of the *Organon* (meaning instrument or tool), entitled *On Interpretation* in English, *De Interpretatione* in Latin, and *Peri Hermeneias* in Greek.

<sup>403</sup> Lash, "Ovid," n.p.

<sup>404</sup> Bonth, *De Aristarch van 't Y*, 31–32; Sluijter, *De "Heydensche Fabulen"*, 23.

<sup>405</sup> Van Mander, *Het Schilder-Boeck*, part 5, fol. \*4v.

<sup>406</sup> Lash, "Mythological Painting and Sculpture," n.p.

<sup>407</sup> Clark, *Vanities of the Eye*, 29; Long, *Openness, Secrecy, Authorship*.

(Commentary on the *Metamorphoses* of Publius Ovidius Nasso), the fifth part of his *Het Schilder-Boeck* of 1604. Here van Mander asserted the following.

*Als vreemde wandelaers in uytheemsche Landen comen te vinden op den wegh constighe metselrijen, oft schoon ghebouwen, t'zy Kercken, oft ghemeen speel-tooneelen, hoogh opghestegen, en dicht toe ghesloten wesende, sy verlangen om weten watter voor uytnemende heerlijcke wercken en vercieringen inwendich zijn, sy sien door gerren en spleten, en vernemen aen d'inwoonders om bescheydt te krijghen: want daer is in de herten der Menschen een drijvende begeerte, te hebben kennis en wetenschap der waerheyt, besonder van behaeghlijcke oft nutte verborghen dinghen.*<sup>408</sup>

It is telling that van Mander chose these words to introduce his commentary on Ovid's *Metamorphoses*, of which he published a translation in the vernacular in the same year.<sup>409</sup>

## Summary: art and philosophy

Based on classical notions, treatises on collecting emerged in the sixteenth century that gave material form to immaterial practices. These theaters were conceived as places for viewing with the explicit aims of eloquence, in the case of Camillo, and of wisdom, in the case of Quiccheberg. Their ideal collections included texts and images that were intended to form

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<sup>408</sup> Van Mander, *Het Schilder-Boeck*, part 5, fol. \*3r. English translation: "When alien wanderers in foreign countries come to find on the road artful brickwork, or beautiful buildings, either churches, or communal playgrounds, rising high, and tightly shut, they long to know what kind of exquisite works and decorations are inside, they see through cracks and crevices, and query the inhabitants to get information: for there is in the hearts of humans a driving desire, to have knowledge and understanding of the truth, especially of pleasant or useful hidden things."

<sup>409</sup> See "(1) Karel van Mander I" in Reznicek and Stompé, "Mander, van Family," n.p. Part 6 of *Het Schilder-Boeck* serves a similar purpose as Ripa's *Iconologia* and provides guidelines "How to render figures, what they mean and what they represent."

mental impressions and thus lead to the acquisition of knowledge and understanding. The importance of images was also recognized within texts, because of the issues surrounding the interpretation of the written word and the communicative potential of images that was reconsidered. The figure of Hermathena embodied the ambition of the fusion of expressive and rational abilities.

Especially Aristotle's philosophy was expanded and appropriated in a Christian-Aristotelian worldview. As counterparts of the five senses, five mental faculties were conceptualized to explain the workings of the mind. In this understanding, the (external) senses pertain to physical perception, while the (internal) faculties pertain to metaphysical perception. The pictorial arts gained prominence in this worldview, since processes of creation were considered intellectual processes with a material, and thus tangible, outcome. Such creative practices were thought to come closest to those of the ultimate creator, God. The memory of the artist as a storehouse or collection of images allowed the artist to imagine and to "invent" or recombine impressions in the act of re-creation.

## 6 Early modern practices

The outlined understanding of notions of collecting and the functioning of images provides the necessary background to study early modern manifestations in the form of cabinets of curiosities and pictures of collections that preceded the genre of constcamer paintings. The desire to know something (*thauma* or *curiositas*) was ingrained in contemporary designations of collections such as the *Wunderkammer* and the *cabinet de curiosités*. This chapter traces the rise of collecting in the private sphere, first by courtiers in Italy and the Holy Roman Empire, and then gradually by wealthy and virtuous individuals. The practice of storing knowledge in the form of text in books also regained popularity, as evidenced by the frequent references to the theater (*theatrum*) in their titles.

The second half of this chapter will reflect on the different traditions of picturing collections, beginning with the theme of the scholar in his study. In the fifteenth and sixteenth centuries, such images regularly revolve around Saint Jerome or Saint Augustine, seated in a room and accompanied by a number of objects. Over time, portraits of individuals were also placed in a similar setting, emphasizing the sitter's erudition. Especially in northern Europe, the theme was expanded to include Saint Luke as an ode to the qualities of both painter and painting. As material and fictional collections grew in size, new ways of representing them were sought and found around 1600, such as the printed title pages of collection catalogues. In addition, pictorial means were used to inventory and categorize natural phenomena within a single painting or a series of paintings.

## Cabinets of curiosities

From the sixteenth century onwards a wide variety of terms was used to denote a collection.

The Latin term *musaeum* was known to refer to a place dedicated to the Muses as well as the Alexandrian *Musaeum*.<sup>410</sup> Around 1517, Johannes Cuspinian (1473-1529) was one of the first to use the ancient Greek *mouseion* to refer to his study in Vienna that included both a library and a collection of (art) objects.<sup>411</sup> In addition to *museo*, popular terms in Italy were *studio*, *studiolo*, *guarderoba*, *gabinetto*, and *teatro*.<sup>412</sup> These terms were in use for both material and immaterial collections. Zuccaro, for example, conceived the memory as “*un’altro Guardarobba del senso*” or another cabinet of (internal) sense.<sup>413</sup>

Quiccheberg (see chapter 5) used the words *theatrum sapientiae*, *Kunstkammer* and *Wunderkammer* to describe the ideal collection, as well as the compound noun *Kunstwunderkammer*.<sup>414</sup> The term *Kunstkammer* was first used in 1550 in relation to the collection of Ferdinand I (1503-1564), Holy Roman Emperor, at Vienna.<sup>415</sup> The term *Wunderkammer* came into use around the same time in relation to the Counts of Zimmern at Bösinggen-Herrenzimmern.<sup>416</sup> After Wilhelm Werner von Zimmern (1485-1575) died, this collection was sold to Ferdinand II (1529-1595), Archduke of Austria, where it became the basis of the renowned collection of Ambras Castle at Innsbruck.<sup>417</sup>

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<sup>410</sup> Findlen, “The Museum,” 60.

<sup>411</sup> Briels, “Amator Pictoriae Artis,” 146.

<sup>412</sup> Findlen, “The Museum,” 59; Hooper-Greenhill, *Museums*, 88–89.

<sup>413</sup> Muller, “Rubens’s Theory,” 246.

<sup>414</sup> The term *Kunstwunderkammer* is used exclusively in the preface dedicated to Emperor Maximilian II by Leo Quiccheberg. According to Samuel, the *Kunstkammer* is an “*artificiosarum rerum conclave*” (conclave for works of art), whereas the *Wunderkammer* is a “*miraculosarum rerum promptuarium*” (collection of wondrous objects). Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 58–59 & 99; Bergvelt et al., *Kabinetten, Galerijen en Musea*, 31.

<sup>415</sup> Eichberger, *Leben mit Kunst*, 10–11. Ferdinand I “was the first to keep his collections in specially designed rooms which he called *Kunstkammer*,” see “(6) Ferdinand I, Holy Roman Emperor” in Miegroet et al., “Habsburg, House of Family,” n.p.

<sup>416</sup> Eichberger, *Leben mit Kunst*, 11; Meadow, “Hans Jacob Fugger,” 182–95.

<sup>417</sup> Bergvelt et al., *Kabinetten, Galerijen en Musea*, 31.

Other terms frequently associated with early modern collections are the “cabinet of curiosities” or “closet of rarities” in English, the *cabinet de curiosités* in French and *raritytenkabinet* in Dutch.<sup>418</sup> These terms have in common that they refer to a storehouse, which could denote a cupboard, a room or even several spaces, as well as the entire collection. This container was intended for *curiositates* and *raritates*, in other words the wondrous things that in classical antiquity were referred to as *thaumasia* or *mirabilia*.<sup>419</sup> The German terms also explicitly included these two components, with *Kunst* as the products of nature or made by man. The Italian ones refer more generally to the concept of the storehouse, without alluding to its content.

Although collections established north and south of the Alps used to be presented as a dichotomy, this is no longer the case.<sup>420</sup> Already at the beginning of the sixteenth century there was a great deal of exchange between the two regions. The exposition below starts with a chronological account of prominent courtly collections of the fifteenth (*studioli*) and sixteenth (*cabinets* and *Kunst- und Wunderkammern*) centuries. The next section features other types of collectors, such as scholars, clerics and citizens. Finally, the relationship between the collection and the book, often using the same terminology, will be discussed.

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<sup>418</sup> Impey and MacGregor, *The Origins of Museums*, 1; Hooper-Greenhill, *Museums*, 86–89; Pomian, *Collectors and Curiosities*, 45–64; Scheller, “Rembrandt en de Encyclopedische Kunstkamer,” 1969, 81; Swan, “Birds of Paradise,” 60. For an overview based on literary sources of cabinets of curiosities in Europe from the sixteenth to the twenty-first century, see <https://curiositas.org/> (accessed October 14, 2020).

<sup>419</sup> Briels, “Amator Pictoriae Artis,” 152; Beßler, “Chambers of Art and Wonders,” n.p.; Hooper-Greenhill, *Museums*, 88.

<sup>420</sup> Eichberger, *Leben mit Kunst*, 12. This was due to Schlosser, *Die Kunst- und Wunderkammern*. Even though a notably reaction was voiced by Scheller in 1969, Schlosser’s work (republished in 1978) remained influential in studies on the history of collecting until the arrival in 1985 of Impey and MacGregor, *The Origins of Museums*.

## Universal collections

### *Studioli*

Derived from the sacred or profane *Schatzkammer* (treasury), patronage began to include private, rather than public (e.g. *musaea*), collecting on a small scale at the court of Cosimo de' Medici in Florence in the fifteenth century.<sup>421</sup> The study (*studio* or *scrittoio*) of his son Piero (1416-1469) was one of the first of its kind and was characterized by contemporaries as containing products of nature (*natura*) and of the human mind (*ingenio humano*).<sup>422</sup> At Urbino, Federico da Montefeltro (1422-1482) commissioned the construction of the Ducal Palace including a *studiolo* around 1450. He commissioned a second *studiolo* for his Ducal Palace at Gubbio in 1478.<sup>423</sup> The decorations of this room have been preserved and the *intarsia* wall paneling [Fig. 31] has been transported to the Metropolitan Museum of Art in New York (NY).

The highly illusionistic woodwork of the Gubbio *studiolo* represents views of small cupboards with open doors, in which objects such as books, a quadrant and a handheld armillary sphere [Fig. 39] are stored on two levels. The frieze above the fictitious collection includes the Latin inscription "*ingenioque viros*" [Fig. 31] or men of genius, referring to the intellectual activity for which this room was intended.<sup>424</sup> The paintings that were originally placed above the woodwork have now been lost. The *studiolo* of Isabella d'Este (1474-1539) at the Ducal Palace in Mantua dates from around 1490 and was equally decorated with *intarsia* panels in the lower registers and paintings in the upper registers.

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<sup>421</sup> Hooper-Greenhill, *Museums*, 53; Grote, *Macrococosmos in Microcosmo*, 108–10. Cosimo sponsored Ficino, see the chapter 5.

<sup>422</sup> Bergvelt et al., *Kabinetten, Galerijen en Musea*, 35; Hooper-Greenhill, *Museums*, 66–67.

<sup>423</sup> Beßler, "Chambers of Art and Wonders," n.p.

<sup>424</sup> For a detailed analysis of the *studioli* of Federico da Montefeltro, see Kirkbride, *Architecture and Memory*.

The first two canvases that decorated the *studiolo* of Isabella d'Este were created by the court painter Andrea Mantegna (ca. 1431-1506). The *Parnassus* (1497) [Fig. 29] is a highly allegorical image that represents Isabella d'Este as Venus and her husband Francesco II Gonzaga (1466-1519), Marquess of Mantua, as Mars. Their seemingly illicit love (Vulcan was Venus' mythological husband) gave birth to Cupid.<sup>425</sup> Underneath the two protagonists we see Apollo *Musagetes* (see chapter 4) playing the lyre in the company of the nine Muses representing universal harmony. The setting is identified as Mount Parnassus, home of the Muses (i.e. home of poetry, music and learning) and the winged horse Pegasus.<sup>426</sup>

Behind Pegasus and Mercury in the *Parnassus* [Fig. 29] we see Mount Helicon and the spring that Pegasus created by striking with his hoof. The spring functions as a symbol of poetical inspiration. The second canvas by Mantegna, *Minerva Expelling the Vices from the Garden of Virtue* (1502) [Fig. 30], centers on the virtue of wisdom and its ability to conquer ignorance.<sup>427</sup> Under the watchful eyes of Justice, Temperance and Fortitude up in the clouds, Minerva (goddess of Wisdom as Prudence) protects the Parnassus from the Vices. Together, these personifications make up the four Cardinal Virtues. Underneath the *studiolo* Isabella kept her collection of antiquities in a *grotta* (cave).<sup>428</sup>

### *Cabinets*

Around the same time Margaret of Austria (1480-1530), Duchess of Savoy, established her court at the Palace of Savoy in Mechelen. She was Governor of the Habsburg Netherlands

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<sup>425</sup> For a marvelous account of the iconographical program of the *Parnassus*, see Cody, "Mantegna and the Orators," 66 & passim.

<sup>426</sup> See "Le *studiolo* d'Isabelle d'Este" (part VIII) of the Louvre exhibition catalogue Agosti and Thiébaud, *Mantegna*.

<sup>427</sup> [http://mini-site.louvre.fr/mantegna/acc/xmlen/section\\_8\\_0.html](http://mini-site.louvre.fr/mantegna/acc/xmlen/section_8_0.html) (accessed October 9, 2020).

<sup>428</sup> See "(6) Isabella d'Este, Marchesa of Mantua" in Geddes et al., "Este Family (i)," n.p. See Cat. No. 152 for Titian's portrait of *Isabella d'Este, Marchesa of Mantua* (1534-1536).

from roughly 1507 to 1530 and built up a magnificent collection.<sup>429</sup> At the Palace of Savoy, one room in particular was devoted to Margaret's collection. Her equivalent of the *studiolo* was referred to as the *petit cabinet* (small cabinet).<sup>430</sup> She mostly brought together religious art in this room and the adjacent *seconde chambre* (second room). Margaret appointed an official court painter in the person of Jacopo de Barbari (ca. 1460/70-1516), known as the "first Italian Renaissance artist of note to travel to the German and Netherlandish courts."<sup>431</sup>

Jacopo is best known for a painting attributed to him entitled *Portrait of Luca Pacioli* (1495) [Fig. 1].<sup>432</sup> The Italian Luca Pacioli (1445-1517) wrote a book on the golden ratio entitled *De divina proportione* (Venice: 1509) and illustrated by Leonardo da Vinci (1452-1519).<sup>433</sup> In this book Pacioli discusses the work of Euclid (ca. 350-ca. 250 BC) and Vitruvius (ca. 80/70-15 BC), as well as Piero della Francesca's (ca. 1415-1492) writings on solid geometry.<sup>434</sup> The *Portrait of Luca Pacioli* predates this publication and depicts the mathematician with his instruments, such as the protractor and dividers. Two solids, the wooden dodecahedron [Fig. 38] and transparent rhombicuboctahedron half filled with water, can also be discerned. In the painting Pacioli "demonstrates the eighth proposition from book XIII of Euclid's *Elements* to a disciple."<sup>435</sup> If not by Jacopo, then still this painter brought with him such Italian interests to the north.

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<sup>429</sup> Eichberger, *Leben mit Kunst*.

<sup>430</sup> Eichberger, 195; Honig, *Jan Brueghel*, 47.

<sup>431</sup> <http://vocab.getty.edu/page/ulan/500001733> (accessed March 27, 2020); "(4) Margaret of Austria, Duchess of Savoy, Regent of the Netherlands" in Miegroet et al., "Habsburg, House of Family," n.p.

<sup>432</sup> Alternatively, the signature "*Iaco. Bar. Vigennis p. 1495*" is associated with Jacometto Veneziano (active from 1472-1497).

<sup>433</sup> Pisano, "Reflections," 32–45.

<sup>434</sup> Piero della Francesca's patron was Federico da Montefeltro, to whom the manuscript *Libellus de quinque corporibus regularibus* (A little book on the five regular polyhedra) is dedicated. Andersen, *The Geometry of an Art*, 34–37.

<sup>435</sup> <http://www.museocapodimonte.beniculturali.it/il-ritratto-di-luca-pacioli-a-capodimonte/> (accessed March 27, 2020). On the left we can see his *Summa de Arithmetica* of 1494, inscribed with "*Li[ber] R[egularum] Luc[ae] Bur[gensis]*."

His successor Bernaert van Orley (ca. 1488/92-ca. 1541) became court painter to the Governor of the Habsburg Netherlands in 1518, and held on to this position roughly until his death.<sup>436</sup> Some of his works were kept in the Habsburg family and reappear in Archduke Leopold Wilhelm's (1614-1662) collection, for example the portrait of *Margaret of Austria* [Cat. No. 78].<sup>437</sup> Bernaert was one of the artists who travelled to Italy to complete his artistic training in Rome. Margaret is known for her keen interest in the art and culture of Renaissance Italy and was in close contact with artists and merchants from that region.<sup>438</sup> It was in this context that she brought up her young nephew Charles (1500-1558), the future Charles V, Holy Roman Emperor [Figs. 260 to 262].

Charles V was born in Ghent and would become the grand master of the Burgundian Order of the Golden Fleece. The personal motto of Charles V was "*Plus Ultra*" or "Further Beyond." This motto referred to the phrase "*Non Plus Ultra*," which according to legend was inscribed on the Pillars of Hercules, located on either side of the Strait of Gibraltar. In antiquity, this was considered to be the edge of the known world.<sup>439</sup> The voyages of curious explorers such as Christopher Columbus (1451-1506) opened up the dimensions of the known world, and Charles V's motto alludes to surpassing Hercules.<sup>440</sup> Charles V was an avid collector just like his aunt, and commissioned works by court artists such as Titian (ca. 1488-1576) and the clockmaker and inventor Janello Torriani (ca. 1500-1585).<sup>441</sup>

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<sup>436</sup> See "(4) Margaret of Austria" in Miegroet et al., "Habsburg, House of Family," n.p. Bernaert van Orley was in turn succeeded by Michiel Coxie I.

<sup>437</sup> *The Infants Jesus and Saint John the Baptist Embracing* [Cat. Nos. 69, 70, and 159] is mistakenly attributed to Bernaert on the picture frames represented in three constcamer paintings. The creator was perhaps Marco d'Oggiono, see Eichberger, *Leben mit Kunst*, 308.

<sup>438</sup> Eichberger, 277–78; "(4) Margaret of Austria" in Miegroet et al., "Habsburg, House of Family," n.p.

<sup>439</sup> Zanetti, *Janello Torriani*, 199; Jordano, "The Plus Oultra Writing Cabinet of Charles V," 14.

<sup>440</sup> Rosenthal, "Plus Ultra," 221–22 & 227–28.

<sup>441</sup> In Spanish Janello Torriani is also known as Juanelo Turriano. Zanetti, *Janello Torriani*, 2; Zanetti, *Juanelo Turriano*.

Outside of Charles V's realm, Francis I (1494-1547) of France, incessantly engaged in wars with the Habsburgs, was a great patron of the arts. He married Louise of Savoy (1476-1531), whose brother Philibert II (1480-1504), Duke of Savoy, was the spouse of Margaret of Austria.<sup>442</sup> Francis I is best known for his reconstruction and expansion of the Château de Fontainebleau, inviting Italian architects and painters to contribute to this project. It was for Francis I, a member of the Order of the Golden Fleece, that Camillo created his memory theater in the early 1530s (see chapter 5).<sup>443</sup>

#### *Kunst- und Wunderkammern*

Within the Holy Roman Empire, Charles V's younger brother Ferdinand I constructed the *Kunstammer* in Vienna (ca. 1550), while Ferdinand I's son Ferdinand II established the *Wunderkammer* in Ambras Castle (1570s). Albert V (1528-1579), Duke of Bavaria and member of the House of Wittelsbach, married a daughter of Ferdinand I, Anna of Austria (1528-1590). At the Munich court, Albert V (also a member of the Order of the Golden Fleece) founded a collection and constructed a *Kunstammer* to house it in close collaboration with Quiccheberg.<sup>444</sup> The influence of Quiccheberg's treatise of 1565, through the mediation of Jacopo Strada (1515-1588) [e.g. Cat. No. 42], was already noticeable in the ordering system of the collection of Ferdinand II in Ambras Castle.<sup>445</sup>

Around 1560, Augustus (1526-1586), Elector of Saxony, founded the Dresden *Kunstammer*. In 1587, under the supervision of his successor Christian I (1560-1591) the first inventory of this collection was compiled.<sup>446</sup> At the suggestion of Gabriel Kaltemarckt

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<sup>442</sup> See "(4) Margaret of Austria" in Miegroet et al., "Habsburg, House of Family," n.p.

<sup>443</sup> Bolzoni, "Théâtres de mémoire," 61–74.

<sup>444</sup> For more information, see Pilaski, "The Munich *Kunstammer*."

<sup>445</sup> Jansen, *Jacopo Strada and Cultural Patronage*, 591 (note 39); Fučíková, *Rudolf II and Prague*, 9.

<sup>446</sup> Dupré and Korey, "Inside the *Kunstammer*," 408–9.

the Dresden *Kunstammer* was subsequently enlarged.<sup>447</sup> In Kassel, William IV (1532-1592), Landgrave of Hesse-Kassel, established a *Kunstammer* around the same time. The oldest surviving inventory of this *Kunstammer* dates from 1573. After the death of William IV, his son Maurice (1572-1632), continued his collecting practices in Kassel. Especially under Landgrave Charles I (1654-1730), the *Kunstammer* was greatly expanded and an additional *Kunsthau*s was built.<sup>448</sup>

Count Peter Ernst I von Mansfeld-Vorderort (1517-1604), situated in Saxony-Anhalt, came to the Habsburg Netherlands with Charles V. As Governor of Luxembourg and member of the Order of the Golden Fleece, he had the means to build himself a magnificent Renaissance castle in Luxembourg. *La Fontaine* or The Fountain, as his castle was called, housed an impressive collection. Recently attempts have been made to reconstruct his castle and collection.<sup>449</sup> Since Count Mansfeld did not have any legitimate heirs – he outlived his three sons – he donated his collection to Philip II [Fig. 262] at the time of his death.<sup>450</sup> It contained nearly sixty sculptures and fifty antiquities (among them the busts of Roman emperors in bronze and marble), books, and more than three hundred paintings, including numerous portraits from the “Large Gallery” and over thirty representations of battles.<sup>451</sup>

From 1592-1594 Count Mansfeld was interim Governor of the Spanish Habsburg Netherlands. At this point Rudolf II (1552-1612) had succeeded his father Maximilian II (1527-1576), son of Ferdinand I, as Holy Roman Emperor. From 1583 onwards, Rudolf II

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<sup>447</sup> Gutfleisch and Menzhausen, “How a *Kunstammer* Should Be Formed,” 3–32; Scheicher, “*Kunstammer*,” n.p.

<sup>448</sup> Leopold, “Collecting Instruments,” 151–57.

<sup>449</sup> The research results can be found in Mousset and de Jonge, *Un Prince de la Renaissance*.

<sup>450</sup> Peter Ernst I’s collection is still largely part of the contemporary collection of the Museo del Prado in Madrid. Due to the fire that destroyed the Royal Alcázar of Madrid in 1734, several items got lost. The part that was kept in the Prado Palace was later dispersed over various residences.

<sup>451</sup> Mousset and de Jonge, *Un Prince de la Renaissance*, 2:292–300 & 310.

preferred Prague over Vienna as his main place of residence.<sup>452</sup> His *Kunstammer* at Prague Castle is perhaps the best-known collection of the time.<sup>453</sup> Rudolf II was the patron of a great many artists such as Hoefnagel [Fig. 130], and scientists such as his personal physician Anselmus de Boodt (1550-1632) of Bruges, who were active on the verge of natural philosophy, alchemy and instrumentation.<sup>454</sup> In his *Het Schilder-Boeck*, Karel van Mander characterized Rudolf II as the “*meesten Schilder-const-beminder der Weerelt*” (greatest lover of painting in the world).<sup>455</sup>

Albert VII (1559-1621), Archduke of Austria and a younger brother of Rudolf II, became Governor of the Spanish Habsburg Netherlands in 1595. Shortly after, he married Isabella Clara Eugenia (1566-1633), daughter of Philip II (1527-1598) of Spain.<sup>456</sup> After Albert’s death, Isabella continued to govern the Spanish Habsburg Netherlands in name of her nephew Philip IV (1605-1665) of Spain. Like their distinguished family members, the Archdukes Albert and Isabella held collecting in high esteem and kept collections in their palaces – the Palace of Coudenberg in Brussels [e.g. Cat. No. 17], the Castle of Mariemont (their summer retreat) [e.g. Cat. No. 134], and the Castle of Tervuren (their hunting lodge) [e.g. Cat. No. 136].<sup>457</sup> The Archdukes were equally fond of the arts and sciences, and are closely associated with Antwerp’s collecting practices and the emergence of the constcamer genre in their territories (see chapter 7).

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<sup>452</sup> See “(10) Rudolf II, Holy Roman Emperor” in Miegroet et al., “Habsburg, House of Family,” n.p.

<sup>453</sup> For a comprehensive overview, see Fučíková, *Rudolf II and Prague*.

<sup>454</sup> Fučíková, 32 & 62; Leopold, “Collecting Instruments,” 152.

<sup>455</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4v.

<sup>456</sup> Hortal Muñoz, “The Household of Archduke Albert,” 1015, 1022–23 & 1044. Isabella’s grandfather, Charles V, was the brother of Albert VII’s grandfather, Ferdinand I [Figs. 260 and 262].

<sup>457</sup> See “(15) Isabella Clara Eugenia, Archduchess of Austria” in Miegroet et al., “Habsburg, House of Family,” n.p.

## Specialized collectors

Scholars, clerics, citizens

In addition to courtly collections, scholars, clerics, and humanistically educated citizens also began to collect things in their private homes.<sup>458</sup> The Venetian collector Marcantonio Michiel (1484-1552) is of interest, since he left behind a manuscript (1521-1543) that was first published as *Notizia d'opere di Disegno* in 1800 and subsequently transcribed by scholars such as von Frimmel (in 1888 and 1907).<sup>459</sup> The *Notizia* describe works of art that Michiel encountered in public and private collections and give insight into northern Italian collecting practices.<sup>460</sup> Michiel was furthermore acquainted with the physician and cleric Paolo Giovo (1483-1552).<sup>461</sup>

Around 1540 Giovo built a villa in Como, supposedly on the ruins of the villa of Pliny the Elder, for his impressive collection. Giovo called this place a *museo*, which was open to visitors and became the prototype for the museum as we know it today.<sup>462</sup> The *museo* included a room with depictions of the Muses, as well as a *cubiculum* dedicated to Minerva and an adjacent library dedicated to Mercury.<sup>463</sup> It is best known, however, for the collection of portraits of illustrious men (also known as the Giovo Series).<sup>464</sup> According to Vasari it was actually Giovo who initiated work on *Le Vite* with the approval of Cardinal Alessandro Farnese (1520-1589), grandson of Pope Paul III and inheritor of the Palazzo Farnese in

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<sup>458</sup> Eichberger, *Leben mit Kunst*, 12.

<sup>459</sup> Lauber, "«Gran Forza et Gran Vivacità»,» 171. See also chapter 2.

<sup>460</sup> Fletcher, "Marcantonio Michiel," 454.

<sup>461</sup> Fletcher, 455.

<sup>462</sup> Findlen, "The Museum," 62; Beßler, *Wunderkammern*, 55–56.

<sup>463</sup> Findlen, "The Museum," 62; Watson, *Achille Bocchi*, 146. Bocchi dedicated his *Symb. LXXXVIII* to Giovo.

<sup>464</sup> For more information, see Minonzio, "Il Museo di Giovo."

Rome.<sup>465</sup> This Palazzo housed the Farnese collection of classical sculpture, including the renowned (then and now) *Farnese Hercules* [e.g. Cat. No. 5].<sup>466</sup>

Another important collector of antique sculpture in Rome was Pope Julius II (1443-1513), who commissioned the creation of the Cortile del Belvedere of which an antiquarium was part.<sup>467</sup> Here he displayed his collection of which the most famous showpieces are the *Apollo Belvedere* [e.g. Cat. No. 9], the *Torso Belvedere* [e.g. Cat. No. 48] and the *Laocoon Group* [e.g. Cat. No. 8]. Julius II commissioned Raphael (1483-1520) from Urbino to decorate the rooms of his private apartment in the Vatican. The first room was his study (*studiolo*) called the *Stanza della Segnatura*, which was intended to house the Pope's collection of books. According to Giovio, Julius II himself contributed to Raphael's iconographical program.<sup>468</sup>

The four walls of the *Stanza della Segnatura* (1508-1511) are decorated with the *Disputation of the Most Holy Sacrament* (or theology), the *School of Athens* (or philosophy) [Fig. 33], the *Cardinal and Theological Virtues and the Law* (or justice), and the *Parnassus* (or poetry) [Fig. 34]. On the ceiling we find their accompanying personifications [Fig. 35]. Furthermore, between Philosophy and Poetry there is a curious representation, possibly of the *Prime Mover* [Fig. 36] (see chapter 11). The lower register of the wall with the *Parnassus* (see chapter 12) displays illusionistic cabinets executed in fresco rather than *intarsia*, one of which holds two skeletal Platonic solids [Fig. 37]. These are reminiscent of the illustrations by Leonardo for Pacioli's *Divina Proportione* [Fig. 38], published simultaneously in 1509.<sup>469</sup>

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<sup>465</sup> Minonzo, 128 & 138 (note 149).

<sup>466</sup> Haskell and Penny, *Taste and the Antique*, 229–32.

<sup>467</sup> See "(2) Pope Julius II" in Wohl and Eiche, "Rovere, Della Family (i)," n.p.

<sup>468</sup> See "(2) Pope Julius II" in Wohl and Eiche, n.p.

<sup>469</sup> For an in-depth discussion of the ensemble, see Joost-Gaugier, *Raphael's Stanza Della Segnatura*.

The association of the *studiolo* with wisdom can be illustrated with another example from ecclesiastical circles. Gerolamo Landriani (general of the Humiliati from 1485-1525) established the *Studiolo Landriani* [Fig. 32] in the Cloister of Sant'Abbondio in Cremona around 1513. The ceiling and upper walls were decorated with a cycle of frescoes. The upper walls contains twelve lunettes, in which we can discern the half-length figures of philosophers and astronomers (among them Plato, Aristotle, Seneca and Ptolemy). The lunettes are alternated with eight roundels or *tondi*, representing Roman emperors (Augustus, Nero, Galba, and Hadrian) and ancient scenes (including Roman Charity). The woman in the central *oculus* of the ceiling is identified as Ancient Wisdom or *Divina Sapientia*. It is telling that the figure of Aristotle in this *studiolo* is accompanied by the *Metaphysica's* opening line: "*Omnes homines natura scire desiderant.*"<sup>470</sup>

Collectors such as the Bolognese Aristotle (Aldrovandi), Gessner, Fuchs, and Agricola have already been discussed (see chapter 5), because they were mentioned in Quiccheberg's *Inscriptiones*. These collectors were not the only ones with specialized collections focused on specific domains such as zoology, botany, and geology. Since outside of the courts collectors usually had more humble means to acquire objects, universality was too ambitious a goal. Quiccheberg stated that it was nevertheless virtuous to collect in this fashion as well.<sup>471</sup>

Antwerp saw the emergence of numerous specialized collections by the end of the sixteenth century. Inventories have been preserved that inform our modern understanding of the collectors – including painters, art dealers, gold- and silversmiths, apothecaries and grocers, printers and engravers – and their collecting practices in Antwerp in the

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<sup>470</sup> Leino and Burnett, "Myth and Astronomy," 273–74 & 277; Zanetti, *Janello Torriani*, 44 & 80. In English: "All men naturally desire knowledge." In ancient Greek: "*Pantes anthropoi tou eidenai oregontai physei.*"

<sup>471</sup> Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 29 & 74.

seventeenth century.<sup>472</sup> A prominent contemporary collection was that of Peter Paul Rubens (1577-1640), whose collection included a great number of paintings, antique sculptures, coins and gems, prints and drawings, and an impressive library (see chapter 7).<sup>473</sup>

### Textual theaters

Books themselves can be understood as a kind of collection, and their connection with contemporary collections is best illustrated by the term used for both: the theater or a “place for seeing” (see chapter 4). From the sixteenth century onwards frequent reference is made to the theater (*theatrum*) in book titles.<sup>474</sup> This metaphor was preceded by the mirror (*speculum*), which also remained in use.<sup>475</sup> Both terms stress the reliance on vision for the transfer of knowledge, since we also read with our eyes.<sup>476</sup>

Just like the above-mentioned practices of collecting, literary theaters can be universal, as in the *theatrum mundi*, or specialized. An example of an encyclopedic volume is Theodor Zwinger’s *Theatrum Vitae Humanae* (Basel: 1565). Domain specific examples include Abraham Ortelius’ *Theatrum orbis terrarum* (Antwerp: 1570) and Jacques Besson’s *Theatre des instrumens mathematiques et mechaniques* (Lyon: 1578).<sup>477</sup>

In a similar vein the term *Kunstkammer* found its way into book titles. The example *par excellence* is Daniel Mögling’s (1596-1635) *Mechanischer Kunstkammer* (Frankfurt am

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<sup>472</sup> Rijks, “Catalysts of Knowledge,” 20; Denucé, *De Antwerpsche “Konstkamers”*; Duverger, *Antwerpse Kunstinventarissen: 1*; Duverger, *Antwerpse Kunstinventarissen: 14*.

<sup>473</sup> Rubens’ collection has been studied extensively, see Muller, *Rubens*; Belkin and Healy, *A House of Art*. For more information on his library, see Vander Auwera et al., *Rubens*; Muller, *Rubens*, 22–23.

<sup>474</sup> Van Bruaene, “The Theatrum,” 33–34; de Bruijn, “From Text to Theatre,” 347. For an overview of *theatrum* literature from roughly 1500 to 1800, see <http://www.theatra.de/> (accessed October 8, 2020).

<sup>475</sup> Blair, *The Theater of Nature*, 178. See for example the *Cosmographicaal Glasse* (London: 1559) [Fig. 199], elaborately discussed in Heninger, *The Cosmographical Glass*.

<sup>476</sup> de Bruijn, “From Text to Theatre,” 348; Van Bruaene, “The Theatrum,” 33.

<sup>477</sup> Blair, *The Theater of Nature*, 153–79. For more information on the *theatrum mundi*, see for example Bernheimer, “Theatrum Mundi”; Hooper-Greenhill, *Museums*, 82.

Main: 1629). The *Mechanischer Kunstammer* is a translation of Guidobaldo del Monte's (1545-1607) *Mechanicorum Liber* of 1577.<sup>478</sup> Mögling's reference to a *Kunstammer* was perhaps derived from Johann Faulhaber's (1580-1635) *Geheime Kunstammer* (Ulm: 1628). This treatise functioned as a catalogue for Faulhaber's collection of "*hundert allerhand Kriegs Stratagemata, auch andere Unerhörte Secreta, und Machinae mirabiles zusehen / dergleichen in Europa (respective) wenig zu finden*" or military stratagems, unheard-of secrets, and wonderful devices.<sup>479</sup>

## Pictures of collections

Evidence of material and textual collections are largely handed down to us by means of written records, such as descriptions and inventories. In addition, there are pictorial sources that inform us about early modern collecting practices. First the theme of the scholar in his study and its variations (both religious and secular) are highlighted, a theme that went hand in hand with the emergence of the *studiolo*. Subsequently, the drawn and printed representations of contemporary collections will be addressed.<sup>480</sup> This overview culminates in the study of painted catalogues or pictures that in themselves contain imaginary assemblages. Such examples are considered iconographic precursors of the seventeenth-century genre of constcamer paintings.

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<sup>478</sup> Popplow, "Court Mathematicians," 293.

<sup>479</sup> Popplow, 299.

<sup>480</sup> Lugli, *Naturalia et Mirabilia*, 38, 55 & passim. Lugli discusses a wide variety of printed images (1599-1727).

## Scholar in his study

### Saint Jerome and Saint Augustine

Small collections feature in paintings of a scholar in his study. An early example is *Saint Jerome in His Study* (ca. 1435) [Fig. 9] by the workshop of Jan van Eyck (ca. 1390-1441) in Bruges. Saint Jerome (347-420 AD), translator of the Bible, is shown studying a book in a contemplative pose in his study.<sup>481</sup> Jerome's study contains *inter alia* books, writing utensils, a sandglass and an astrolabe [e.g. Fig. 183].<sup>482</sup> The folded letter on the table suggests that Saint Jerome is depicted in the guise of Cardinal Niccolò Albergati (1373-1443), of whom van Eyck painted a portrait around the same time [Cat. No. 41]. Albergati supposedly took *Saint Jerome in His Study* with him to Italy where it would become part of the Medici collection in Florence after the death of the Cardinal.<sup>483</sup>

In Florence we find a fresco [Fig. 10] of *Saint Jerome in His Study* (1480), quite similar in execution, by Domenico Ghirlandaio (1448-1494). It was affixed in the church of Ognissanti that was run by the order of the Humiliati, the same order that was responsible for the *Studiolo Landriani* [Fig. 32]. In Florence, Jerome's writing desk holds eyeglasses on the side, as well as two inkwells and a pair of scissors. Opposite Jerome, on the other side of the nave of the Ognissanti, there is a fresco of *Saint Augustine in His Study* (1480) [Fig. 11] by Sandro Botticelli (ca. 1445-1510). Just like his contemporary Jerome, Augustine (see chapter 5) was one of the Latin Church Fathers.<sup>484</sup> At eye level of Augustine, who looks up at the heavens, we see an armillary sphere, an open book showing text and diagrams, and an

<sup>481</sup> Briels, "Amator Pictoriae Artis," 152–54.

<sup>482</sup> The undetailed astrolabe looks like a simple theodolite [e.g. Cat. No. 84], but this surveying instrument was not introduced until the sixteenth century. See Bud and Warner, *Instruments of Science*, 611–12.

<sup>483</sup> Briels, "Amator Pictoriae Artis," 184–86.

<sup>484</sup> Augustine introduced the concept of *docta obscuritas*.

elaborate mechanical clock. Both Saints are depicted as humanist scholars surrounded by objects of learning and erudition.

In Venice, the subject of the scholar in his study was taken up by Vittore Carpaccio (ca. 1460-ca. 1526). His *Saint Augustine in His Study* [Fig. 12] of 1502 also depicts the Saint when Jerome appears to him in a vision.<sup>485</sup> Augustine's enlarged study is equipped with an armillary sphere, books, music scores, sculpture, a seashell, and much more. In addition, the back wall shows an opening to another room, in which various scientific instruments are depicted hanging from a shelf, including an astrolabe [similar to Figs. 31 and 39].

An influential print of *Saint Jerome in His Study* [Fig. 13] was furthermore created by Albrecht Dürer in 1514. He also placed Jerome in a contemporary interior with large windows of crown glass, also known as *Butzenscheiben* in German. The reflection of the glass is meticulously captured on the thick walls surrounding the windows. This print features as a picture-within-picture in a *neo-constcamer* painting [Fig. 274] (see chapter 9). The scene of theological contemplation is one of three *Meisterstiche* by Dürer, together with *Knight, Death and the Devil* (1513) [Fig. 15] and *Melencolia I* (1514) [Fig. 14], referring to the *vita activa* and the (secular) *vita contemplativa*, respectively.<sup>486</sup>

The iconographical theme of Saint Jerome in his study gained popularity in Antwerp and was the subject of several paintings by Marinus van Reymerswaele (ca. 1490-ca. 1567).<sup>487</sup> His *Saint Jerome* [Fig. 16] of 1541 is surrounded by books, a skull as a reference to the finiteness of life (a *vanitas* symbol), and an illuminated manuscript displaying the Last Judgement. Such paintings admonish to study the eternal rather than the ephemeral, and similar examples can be found in several constcamer paintings [Cat. Nos. 40, 67 and 111].

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<sup>485</sup> A preparatory sketch of this composition has been preserved at the British Museum in London.

<sup>486</sup> Parshall, "Graphic Knowledge," 393, 398 & 403–5.

<sup>487</sup> Van der Stock, *In Search of Utopia*, 152–55.

Another interesting example is *Saint Jerome in His Study* (ca. 1530) [Fig. 17], which is reproduced in *The Painting Collection of the Counts of Bronckhorst-Batenburg in Anholt* (ca. 1645) [Fig. 64] (see chapter 9).

#### Portrait paintings

The concept of the scholar in his study also found its way into the genre of portraiture. An early example can be found in *La Couronne Margaritique* (1504-1505) by Jean Lemaire (1473-1525), dedicated to Margaret of Austria.<sup>488</sup> This manuscript includes the miniature *Jean Lemaire Composing a Text in His Study* [Fig. 28]. The composition is similar to those of Saints Jerome and Augustine in their studies. The protagonist Lemaire sits behind a desk and is surrounded by books and writing utensils. Additionally, a clock mounted against the wall can be seen. The study opens to a view of a landscape, in which we see the recently deceased Philibert II on horseback and a castle surrounded by a moat in the distance.<sup>489</sup> Since Lemaire composed poems on the death of Philibert II in *La Couronne Margaritique*, the *vista* might present us with his (artistic) vision during the act of recounting the tragic events.

A notable creator of portrait paintings along the lines of the scholar in his study is Hans Holbein (ca. 1497-1543). His *Portrait of Erasmus of Rotterdam* (1523) [Fig. 18] depicts Erasmus (1466-1536) as resembling Saint Jerome. This was appropriate in an iconographic sense because Erasmus had published a nine-volume edition of Jerome's letters in 1516.<sup>490</sup> This edition is represented underneath his hands, labeled with "*Herakleioi Ponoï*" (Herculean Labors) in ancient Greek, as well as "*Erasmī Roterodami*" (Erasmus of Rotterdam) in Latin letters. This title refers to the editing efforts of Erasmus and compares them with the Twelve

<sup>488</sup> Eichberger, *Leben mit Kunst*, 279–80.

<sup>489</sup> Bass, "Justus Lipsius," 174–75.

<sup>490</sup> Pabel, *Herculean Labours*, 1–2.

Labors of Hercules.<sup>491</sup> A second book with inscriptions can be found on the shelf in the top right corner. The cover is dated with the Roman numerals “MDXXIII” (1523), while the Latin couplet on the side reads “I am Johannes Holbein, whom it is easier to denigrate than to emulate.”<sup>492</sup> This personal statement of the painter emphasizes that both the scholar and the artist are models for *aemulatio* or emulation (see chapter 7).

In the subsequent decades Holbein painted numerous such portraits, two of which stand out. The earlier is the portrait of mathematician and astronomer *Nicholas Kratzer* (ca. 1487-1550) of 1528 [Fig. 19].<sup>493</sup> Kratzer was the royal astronomer of Henry VIII (1491-1547) of England and tutor to Sir Thomas More (1478-1535). The instruments surrounding Kratzer, including (wing) dividers and unfinished polyhedral sundial, reflect his occupation.<sup>494</sup> From a slightly later date is the *Portrait of Georg Giese* (1497-1562) [Fig. 20]. The Hanseatic merchant had an office in London, which seems to provide the setting for the portrait. The tools of his trade are represented by the balance (or scales), writing utensils and paperwork.<sup>495</sup> In addition, Giese is surrounded by precious objects such as a timepiece, coins and rings, and an exquisite crystal vase holding pinks and sprigs of rosemary, which were thought to strengthen memory and mind.<sup>496</sup>

By far the most celebrated work of Holbein is the double portrait *The Ambassadors* [Fig. 21] of 1533. In it the full-length figures of the diplomat Jean de Dintevile (1504-1555) and the Bishop Georges de Selve (1508-1541) frame a collection of objects as well as an

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<sup>491</sup> Pabel, 4; Nelson, *Disharmony of the Spheres*, 94.

<sup>492</sup> <https://www.nationalgallery.org.uk/paintings/hans-holbein-the-younger-erasmus> (accessed April 1, 2020); Nelson, *Disharmony of the Spheres*, 109.

<sup>493</sup> This portrait is part of the collection of the Louvre in Paris. For the sixteenth-century copy preserved at the National Portrait Gallery in London, see

<https://www.npg.org.uk/collections/search/portrait/mw03701/Nicholas-Kratzer> (accessed April 1, 2020).

<sup>494</sup> See “(3) Hans Holbein (ii)” in Foister, “Holbein Family,” n.p.

<sup>495</sup> The sitter is identified by the inscription near the balance (“G. Gisze”) and the letter in his hand.

<sup>496</sup> Brenninkmeijer-de Rooij and Ekkart, *Roots of Seventeenth-Century Flower Painting*, 27–28.

anamorphic skull at their feet. Some of the instruments resemble those of the portrait of *Nicholas Kratzer*, such as the dividers, polyhedral sundial, pillar dial (or cylindrical sundial), and universal equinoctial dial (or semi-circular astronomical quadrant, disassembled into two parts).<sup>497</sup> The shelves also display a horary quadrant (inscribed with “*Umbra Versa*”), a terrestrial and a celestial globe, and the torquetum. This instrument is illustrated in Peter Apian’s (1495-1152) treatise *Introductio geographica* (Ingolstadt: 1533) of the same year as the double portrait.<sup>498</sup> The bottom shelf is furthermore characterized by a foreshortened lute, a case of flutes, a Lutheran hymnal, and an arithmetic book, kept open by a square.<sup>499</sup>

In these portrait paintings, the objects represent the sitters and their interests. Other artists also ventured in this direction, such as Nicolas Neufchatel (ca. 1527-ca. 1590). His *Portrait of the Goldsmith Wenzel Jamnitzer* (1562-1563) [Fig. 24] depicts Jamnitzer (1507/8-1585), who was active at the courts of various sixteenth-century Habsburgs, including Charles V, Ferdinand I, Maximilian II, and Rudolf II. Jamnitzer is credited with the invention of a perspective drawing instrument [Fig. 55], and the proportional compass [e.g. Cat. No. 73]. He is also known for the practice of lifecasting plants and animals, and the measuring scale (*Maßstab*) to determine the weight of a metal object.<sup>500</sup> All of these devices and practices are included in Jamnitzer’s portrait. The use of the proportional compass is neatly illustrated by juxtaposing the little statuette of Neptune with a perfectly reduced rendering on paper. Jamnitzer’s perspective drawing instrument can be found in a constcamer painting [Cat. No. 73].

<sup>497</sup> Dekker and Lippincott, “The Scientific Instruments,” 106.

<sup>498</sup> <https://archive.org/details/introductiogeogr00apia/page/n175/mode/2up> (accessed April 2, 2020). Based on the work *In hoc opere haec continentur Nova translatio primi libri geographiae Cl. Ptolomaei* (1514) of Johannes Werner (1468-1522) of Nuremberg. <https://archive.org/details/ARes04201/page/n4/mode/2up> (accessed April 2, 2020). Holbein probably used a real instrument for his depiction. Dekker and Lippincott, 122.

<sup>499</sup> Nelson, *Disharmony of the Spheres*, 112–16.

<sup>500</sup> Hauschke, “The Mathematical Instruments of Wenzel Jamnitzer,” 6; Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 17–18 & 28; Roberts, Schaffer, and Dear, *The Mindful Hand*, 46.

## Saint Luke

A final overlapping iconographic theme is that of Saint Luke the Evangelist painting the Virgin Mary [see Fig. 45 & Cat. No. 43]. An outstanding example is Maerten van Heemskerck's (1498-1574) *Saint Luke Painting the Virgin* (ca. 1550) [Fig. 23]. Its well-known predecessor is Rogier van der Weyden's (ca. 1399-1464) *Saint Luke Drawing the Virgin* (ca. 1435) [Fig. 22].<sup>501</sup> By contrast, van Heemskerck surrounds his subjects with a small collection of objects, consisting of an armillary sphere, books, and (antique) sculpture. One of the books on the shelf is labelled "*Dioskorides*" in ancient Greek, referring to Dioscorides (ca. 40-90 AD), and another one "*Nikandros*" for Nicander (2<sup>nd</sup> century BC). Both were famous for their medical works.<sup>502</sup> Saint Luke was thought to be both a physician and an artist, and thus became the patron saint for painters, apothecaries, and doctors.<sup>503</sup>

The open book in the foreground [Fig. 23] reads "*Taainou Pedi Anatomiron*" – rather than "*Galinou Peri Anatomiron*" – referring to Galen's (129-ca. 210 AD) works on anatomy.<sup>504</sup> The misspelling and the combination of Latin and ancient Greek letters suggests that van Heemskerck did not possess knowledge of the script and imitated the letters optically. The inclusion of this book emphasizes above all that the observation and knowledge of anatomy is crucial for the accurate depiction of Saint Luke, Virgin and Child. The space behind them opens to a courtyard that is dedicated to sculpture; both the finished product and the process of creation. This scene is partly based on an actual collection and

<sup>501</sup> Beijer, Lemmens, and Taverne, *Het Schildersatelier*, 7 & 27–28; DiFuria, "Maerten van Heemskerck's Collection Imagery," 48. Saint Luke, one of the Four Evangelists, is accompanied by a bull.

<sup>502</sup> Winner, "Die Quellen der Pictura-Allegorien," 34; Veldman, "Maarten van Heemskerck," 96.

<sup>503</sup> Howe, "Luke," n.p.

<sup>504</sup> Veldman, "Maarten van Heemskerck," 93–94.

location, the Casa Sassi in Rome [Fig. 26], which van Heemskerck visited and sketched during his travels in the 1530s.<sup>505</sup>

## Pictorial catalogues

### Graphical representations

On his journey from 1532 to around 1537 van Heemskerck made over a hundred drawings, some of which depict collections of antiquities. The artist from Haarlem visited about thirteen such collections in Rome, including the Casa Sassi.<sup>506</sup> Back in the Habsburg Netherlands, his collection of drawings formed the basis for two prints dating from 1553. *The Statue Court of the Casa Sassi at Rome* [Fig. 27] was printed in Haarlem, while the *Palazzo Valle Capranica Cortile and Sculpture Collection* [Fig. 25] was printed in Antwerp.<sup>507</sup> The documentation of statues and sculptural fragments *in situ* is a novelty that van Heemskerck is credited with.<sup>508</sup>

By the end of the sixteenth century Ferrante Imperato (ca. 1525-ca. 1615) published his *Dell'Historia Naturale* (Naples: 1599). It includes a woodcut [Fig. 2] with a “*Ritratto del Museo di Ferrante Imperato*” or a portrait of his museum.<sup>509</sup> Imperato’s original approach would be followed in subsequent publications, such as the title page [Fig. 3] of the *Continuatio Rariorum* (Nuremberg: 1616) by Basil Besler (1561-1629).<sup>510</sup> The title page of Ole Worm’s (1588-1654) catalogue *Museum Wormianum* (Copenhagen: 1655) also included an engraving of his collection [Fig. 4].<sup>511</sup> Other examples are: the *Musaeum Franc. Calceolarii*

<sup>505</sup> Jonckheere, “Images of Stone,” 125; Veldman, “Maarten van Heemskerck,” 91 & 100.

<sup>506</sup> DiFuria, “Maarten van Heemskerck’s Collection Imagery,” 27.

<sup>507</sup> Filipczak, *Picturing Art in Antwerp*, 62–65; DiFuria, “Maarten van Heemskerck’s Collection Imagery,” 31.

<sup>508</sup> DiFuria, “Maarten van Heemskerck’s Collection Imagery,” 32–34.

<sup>509</sup> This is the “first representation of a museum” according to Findlen, *Possessing Nature*, 38.

<sup>510</sup> Lugli, *Naturalia et Mirabilia*, 22 & 101; Scarpa Sonino, *Cabinet d’Amateur*, 10.

<sup>511</sup> Bleichmar, “Seeing the World in a Room,” 26; Yaya, “Wonders of America,” 182.

*jun. Veronensis* (Verona: 1622) of Francesco Calzolari [Fig. 6]; the *Museo, ò Galeria* (Milan: 1666) of Manfredo Settala [Fig. 7]; and the *Museo Cospiano* (Bologna: 1667) of Ferdinando Cospi [Fig. 8], which incorporated part of Aldrovandi's collection.<sup>512</sup>

What these publications have in common is that they focus on natural history collections. This is immediately apparent by looking at the respective illustrations that show a single room full of specimens. Athanasius Kircher (1602-1680), on the other hand, took a more universal approach to his collection at the Jesuit Roman College in Rome. The *Museum Kircherianum* opened to the public around 1660. A treatise on Kircher's museum was published in 1678, entitled the *Musaeum celeberrimum*, and offers a view into the gallery [Fig. 5].<sup>513</sup>

#### Painted inventories

Alternatively, collection imagery could be more fictional in nature, and came into vogue in Antwerp around 1600. A prime example is *The Garden of Eden with the Fall of Man* (ca. 1615) [Fig. 194], created by Jan Brueghel I and Peter Paul Rubens. Brueghel may have been familiar with Imperato's collection since he lived and worked in Naples in 1590.<sup>514</sup> Instead of material or textual catalogues, artists like Brueghel produced pictorial catalogues with a similar purpose, namely to establish a link between the *mundus sensibilis* and the *mundus intelligibilis*.<sup>515</sup> In *The Garden of Eden with the Fall of Man* and other variants [e.g. Cat. No.

<sup>512</sup> Bleichmar, "Seeing the World in a Room," 24 & 27; Beßler, "Chambers of Art and Wonders," n.p.

<sup>513</sup> For more information, see Findlen, *Possessing Nature*, especially 85–87.

<sup>514</sup> Honig, *Jan Brueghel*, 11; Kolb, *Jan Brueghel the Elder*, 54.

<sup>515</sup> Kolb, *Jan Brueghel the Elder*, 54.

84], Brueghel catalogues animals and shows nature's variety, grounded in the visible world around us but placed in an imaginary setting (i.e. paradise).<sup>516</sup>

The pictorial description of flora and fauna in such paintings [Fig. 194] by means of careful mimicry (*mimesis* in ancient Greek or *imitatio* in Latin) validated that images can function as aids in the study of nature, its categorization and understanding. "Art thus joined the sciences as a tool for analyzing the world."<sup>517</sup> Compared to collections of pictures such as Gessner's *Icones animalium* and *Icones avium*, however, the pictorial catalogues of artists like Brueghel have overtly allegorical qualities.<sup>518</sup> The Garden of Eden as the *locus* of a natural history catalogue established a link between the visible world and its divine creator, the contemplation of which leads to spiritual ascent.

One of the methods to categorize nature was to use the four elements [Fig. 251] – earth, water, air, and fire – as an organizational principle. This could not only be applied to cabinets of curiosities like Imperato's collection, but also within a single painting.<sup>519</sup> In the case of *Allegory of the Four Elements with Ceres* (1604) [Fig. 264], a later variant of which is included in *Cognoscenti in a Room Hung with Pictures* [Cat. No. 40], things are grouped together that exemplify one or the other aspect of nature. Fish, coral and seashells are categorized as aquatic, while the abundance of the land is subdivided into flowers, foodstuffs such as fruit and vegetables, and so on. This medium leaves room for the problems that accompany categorization, such as birds that can be associated with both the element of water (waterfowl) and air.

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<sup>516</sup> The earliest example is Brueghel's *The Creation with Adam* (1594). See <http://www.janbrueghel.net/object/paradise-landscape-with-god-telling-adam-to-name-the-animals-rome-galleria-doria-pamphili> (accessed October 14, 2020); Kolb, 47–48.

<sup>517</sup> Honig, *Painting & the Market*, 185–86. See also Smith, *The Body of the Artisan*, 23.

<sup>518</sup> Pomian, *Collectors and Curiosities*, 50.

<sup>519</sup> Kolb, *Jan Brueghel the Elder*, 52–53.

## Summary: rooms for wonder

In Renaissance Europe, private collecting practices re-emerged in different layers of society – at courts and in religious, scholarly, and mercantile circles. The associated “places” dedicated to the Muses and to seeing had their roots in the classical notions of material, textual and immaterial collections. During the fifteenth century, to these was added a pictorial culture of collecting. Such images included, in similar fashion, objects of learning. These were brought together in portraits initially of saints, whose model was to be emulated, but later also of contemporary individuals. The objects depicted in such portraits have significance not only in themselves but also in relation to the person portrayed.

In northern Europe Saint Luke gained prominence as the patron saint of physicians and artists – both observers of nature. In southern Europe, the first “portraits” of material collections were made in the sixteenth century. The art of printing contributed to their dissemination. In addition, the first pictorial catalogues were made around 1600. These visualize objects and concepts that cannot otherwise be looked at, combined in a single image. As such the objects and concepts are framed and their representations make an immaterial reality intelligible. In general, early modern forms of collecting on a universal or specialized scale promoted not only the study of things, but also the enquiry into the nature of things, which is visually stimulated by feelings of wonder and curiosity.

# Part II:

Local historical and intellectual  
contexts

## 7 The city of Antwerp

Constcamer paintings were created almost exclusively in Antwerp, and to a lesser extent in Brussels. The artists of Antwerp even brought the genre to Brussels, the seat of the rulers of the Spanish Habsburg Netherlands. During the reign of Archdukes Albert and Isabella (1598-1621), court painters and other artists retained their workshops in Antwerp. By 1650, however, David Teniers II moved to Brussels when he entered the service of Archduke Leopold Wilhelm. The affluent city of Antwerp with its vast trading networks thus played a crucial role in the emergence and spread of the constcamer genre. This chapter will elaborate on the local contexts that underpinned the conception, production, and trade of paintings.

What was unique about the economic and cultural circumstances in Antwerp that provided fertile ground for the development of the constcamer genre? To answer this question, we will first delve into the local conditions for artistry, especially painting. Prominent themes within this section are the Antwerp Guild of Saint Luke and its members, the organization of labor and training, studio practices such as copying and serial production, and the mechanical reproduction of both images and text. Subsequently we will explore the conditions of the Antwerp art industry by looking at the places where art was traded and the interests of local patrons and collectors. This shows that the cultured elite consisted of learned people from different strata of the population.

We will furthermore take the religious and political situation into account and enquire about the status of the image after the outbreaks of iconoclasm in the second half of the sixteenth century. The Fall of Antwerp in 1585 was particularly influential, pressuring the local population to either convert to Catholicism or leave the city. Responses to these

events were expressed primarily in the printing and letterpress industries. The reign of the Archdukes over the Spanish Habsburg territories ushered in a new period of peace and prosperity, with a Counter-Reformist orientation favorable to the Society of Jesus. The visual and optical theories propagated by the Jesuits emphasized the didactic qualities of the pictorial arts. In the final part of this chapter, publications such as the *Mikrokosmos* (1579) and *Duodecim specula* (1610) will be examined to expose the sociohistorical, cultural, and ideological frameworks within which artists operated in Antwerp.

## Creating art in Antwerp

One of the first publications on artists' workshops, art dealerships, and art collectors in the Low Countries from the fifteenth to eighteenth century appeared in 1905.<sup>520</sup> Important studies specifically on Antwerp were published in 1998 and 2003, the former dealing with sixteenth and seventeenth centuries,<sup>521</sup> the latter covering the period from 1490 to 1609.<sup>522</sup> At the basis of most studies on the production of art in Antwerp are the *Liggeren*. The *Liggeren* are the archives of the Antwerp Guild of Saint Luke that inform us about its history, its transactions, and most notably its members. The contents of the archives were published as early as 1864.<sup>523</sup> The first archival materials date from 1453, whereas the Guild itself was first mentioned some seventy years earlier, in 1382.<sup>524</sup> The *Liggeren* roughly cover the period from 1453 to 1736.<sup>525</sup>

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<sup>520</sup> Floerke, *Studien zur Niederländischen Kunst- und Kulturgeschichte*. For a concise overview of contemporary written sources, see Filipczak, *Picturing Art in Antwerp*, 4.

<sup>521</sup> Honig, *Painting & the Market*.

<sup>522</sup> Vermeylen, *Painting for the Market*.

<sup>523</sup> Leries and Rombouts, *De Liggeren*.

<sup>524</sup> Vermeylen, *Painting for the Market*, 128.

<sup>525</sup> Leries and Rombouts, *De Liggeren*, 1:II. The Guild was abolished in 1773. See De Munck, "Skills," 219.

## Guild of Saint Luke

Saint Luke the Evangelist, who was sometimes pictured as a scholar in his study (see chapter 6), was the patron saint of the Antwerp Guild of artists. The definition of these “artists” should be understood in the broadest sense of the word. The Antwerp Guild of Saint Luke included painters, sculptors, carpenters (including woodcarvers and frame makers), glassblowers, mirror makers, embroiderers, pigment sellers, enamellers, gold- and silversmiths, and persons associated with the printing business (such as printers, booksellers, cartographers, and engravers).<sup>526</sup> At the beginning of the sixteenth century, the profession of art dealer appeared in Antwerp and these merchants were also included in the Guild of Saint Luke.<sup>527</sup> The first such entry in the *Liggeren* dates from 1518.<sup>528</sup> The makers of musical instruments were incorporated in the Guild from 1557 onwards.<sup>529</sup>

Interestingly, even art lovers or *liefhebbers* (*amateurs* in French) were introduced as Guild members by 1602. Jan Brueghel I was dean of the Antwerp Guild of Saint Luke at the time, together with vice-dean Otto van Veen.<sup>530</sup> The first “*lieffhebber der scildereyen*” (lover of paintings) mentioned in the *Liggeren* is the innkeeper Peeter Peetersen.<sup>531</sup> Four more *liefhebbers* entered in 1607.<sup>532</sup> The registrations in the *Liggeren* do not distinguish consistently between *lieffhebber der scildereyen*, *lieffhebber*, *lieffhebber van de kunst* or

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<sup>526</sup> Vermeylen, *Painting for the Market*, 18 & 113. Even though Vermeylen suggests on page 128 that “all those involved in the printing business” entered the Guild in 1558, the *Liggeren* show that the earliest sources of 1453 already mention bookbinders among the members of the Antwerp Guild of Saint Luke. Vermeylen, 128; Leries and Rombouts, *De Liggeren*, 1:3.

<sup>527</sup> Vermeylen, *Painting for the Market*, 66–68 & 134–36.

<sup>528</sup> Leries and Rombouts, *De Liggeren*, 1:89.

<sup>529</sup> Vermeylen, *Painting for the Market*, 92 & 128. Antwerp was especially known for the harpsichords produced by the Ruckers family.

<sup>530</sup> Härting, “Doctrina et Pietas,” 99 & 124; Honig, *Painting & the Market*, 202.

<sup>531</sup> Leries and Rombouts, *De Liggeren*, 1:419.

<sup>532</sup> Leries and Rombouts, 440–41.

*kunstliefhebber*, and *liefhebber der Violiere*.<sup>533</sup> Art lovers could for example be art dealers or art collectors.<sup>534</sup> One of the best known *kunstliefhebbers* was the Antwerp collector Cornelis van der Geest, who joined the Guild around 1621.<sup>535</sup>

The *liefhebber der Violiere* refers to an Antwerp chamber of rhetoric called the *Violieren* (Gillyflower or Wallflower) after an ornamental type of plant. The *Violieren* merged with the Antwerp Guild of Saint Luke in 1480.<sup>536</sup> Their joint motto was “*Wt Ionsten Versaemt*” or “Gathered in a Spirit of Goodwill” and can for example be found on the *Blazon of the Antwerp Guild of Saint Luke* (1526) [Fig. 43] by Dirk Vellert (1480/85-1547).<sup>537</sup> The woodcut contains centrally the depiction of the symbol of Saint Luke the Evangelist, the winged ox or bull [see also Figs. 22 and 23]. Above the reference to Saint Luke we see three gillyflowers or wallflowers, referring to the *Violieren*. The winged bull furthermore holds a coat of arms that consists of three smaller shields. This is the coats of arms of the Antwerp Guild of Saint Luke.

The central emblem of the *Blazon* [Fig. 43] is flanked by the coat of arms of the Duchy of Brabant on the left, and the coat of arms of the Margraviate of Antwerp on the right.<sup>538</sup> The citadel with two hands above it refers to the city of Antwerp, while the double headed eagle refers to the Habsburg rule of the territory. On top of the blazon, we see the

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<sup>533</sup> Lerijs and Rombouts, 440, 446, 546, 578, 632 & passim.

<sup>534</sup> Yeager-Crasselt, “Knowledge and Practice,” 189 & 192.

<sup>535</sup> Yeager-Crasselt, 191; Lerijs and Rombouts, *De Liggeren*, 1:578. Perhaps he already became a member in 1612, see Briels, “Amator Pictoriae Artis,” 144; Lerijs and Rombouts, *De Liggeren*, 1:493.

<sup>536</sup> <https://ivdnt.org/zoeken-in-woordenboeken> -> “violier” (accessed October 27, 2020); Vermeylen, *Painting for the Market*, 128.

<sup>537</sup> For a contemporary explanation of the term “*ionsten*,” see “*Van de Ionste*” in van Mander, *Het Schilder-Boeck*, part 6, fol. 136v. The term corresponds to the modern *gunsten*, which translates in English as “favors.” <https://ivdnt.org/zoeken-in-woordenboeken> -> “jonst” (accessed October 30, 2020).

<sup>538</sup> The *Pompa funebris optimi potentissimiq[ue] principis Alberti Pii, Archiducis Austriae, ducis Burg. Bra. &c.* (Brussels: 1623) is an excellent resource for contemporary coats of arms. See Plate 45 via <https://www.metmuseum.org/art/collection/search/701933>; Plate 34 via <https://www.metmuseum.org/art/collection/search/702164> (both accessed October 27, 2020).

Habsburg coat of arms flanked by two columns, referring to the Pillars of Hercules, and the words “*Plus Oultre*,” the motto of Charles V who had become Holy Roman Emperor in 1519 (see chapter 6).

Vellert also created an engraving of *Saint Luke Painting Madonna and Child* [Fig. 42] in the same year (1526). In the sixteenth century, the motif of Saint Luke painting the Virgin became a pretext for portraying contemporary painters in their workshops [e.g. Fig. 150].<sup>539</sup> Vellert’s engraving, however, depicts the painter wearing a Phrygian cap. This seems to allude to Saint Luke’s ancestry (he was born in Antioch) and his friendship with Saint Paul, whom he accompanied on his travels in Asia Minor.<sup>540</sup> Saint Luke is nevertheless working in a sixteenth-century workshop with classical decorations. The painter is shown seated behind an easel with a panel on it, while holding a palette and *mahlstick* in his left hand and a brush in his right hand. In the adjoining bedroom, behind the pious Madonna and Child, an assistant is at work making paint.<sup>541</sup>

Two other noteworthy blazons of the Antwerp Guild of Saint Luke have come down to us [Figs. 41 and 47]. Although their dating is uncertain, both woodcuts seem to be made around the middle of the sixteenth century. Of special interest is the text underneath the imagery.

*Versaemt al ionstich, constich in u hantieren, / Ter eeren S. Lucas uwen patroon hier / Die de maghet Maria reyn van manieren / Heeft na gheconterfeyt, constich en goedertier, / D’welc te Roomen noch wert hooch geeert, so oock / Poeetsche Schilders, reyn Violieren vroet. (doet,*

<sup>539</sup> Beijer, Lemmens, and Taverne, *Het Schildersatelier*, 7 & 27–29.

<sup>540</sup> Howe, “Luke,” n.p.

<sup>541</sup> See “Het atelier” in Westgeest, *Kunsttechnieken in Historisch Perspectief*, 19–31.

*Comt oock alle Broeders der Rethorijcken, / Helpt nu Rethorica doch minlijck verstercken, /  
Schout twist, soeckt vrede, ô ghy Catholijcken, / Laet vast u gheloove deur liefden wercken, /  
Bemint waerheyt, soo leeft ghy onbeschaemt, / Danckelijck neemt van ons wt ionsten  
versaemt.*<sup>542</sup>

The first column of text refers to poetic painters ("*Poeetsche Schilders*") as pure *Violieren*, and thus emphasizes the link between poetry and painting. The second column addresses Catholic rhetoricians and admonishes them to love the truth ("*Bemint waerheyt*"), that is the Catholic truth. This was perhaps related to the local publication of Protestant literature, since it is documented that Philip II of Spain, successor of Charles V, tried to stop this practice in 1558.<sup>543</sup> Saint Luke is depicted with the Phrygian cap and classic garb in Figure 47 and bareheaded in contemporary costume in Figure 41. Garlands of painter's tools such as palette, square and dividers crown the scene in between columns of the Corinthian order.

The central depiction of Saint Luke painting the Virgin is flanked by *Memoria* and *Eloquentia* in Figure 47. These personifications are extended with *Musica* holding an instrument and *Retorica* holding a flower in Figure 41. Since the musical instrument makers were not incorporated into the Antwerp Guild of Saint Luke until 1557, this seems to be the *terminus post quem* for the latter blazon. On top we see a coat of arms possibly of the County of Burgundy.<sup>544</sup> The rule over the Burgundian Circle, which included the Seventeen Provinces, was transferred to Philip II after the abdication of his father Charles V in 1556. The

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<sup>542</sup> Text transcribed from Figure 41. In addition, the text in Figure 47 ends with "*Vanden Bloocke*," perhaps jokingly referring to the woodblock used for printing. The coat of arms in between the two columns of text is that of the Lordship of Mechelen. See the Plate 33 of the *Pompa funebris* via <https://www.metmuseum.org/art/collection/search/702174> (accessed October 28, 2020).

<sup>543</sup> Vermeylen, *Painting for the Market*, 128; Rijks, "Catalysts of Knowledge," 267.

<sup>544</sup> See Plate 64 of the *Pompa funebris* via <https://www.metmuseum.org/art/collection/search/701979> (accessed October 27, 2020).

roaring lion on top of the knightly armor is perhaps a reference to the unification of the Low Countries after the Treaty of Venlo of 1543.<sup>545</sup> The combination of text, personifications and other symbols included in these blazons expresses the intellectual, political, and religious values that were applicable to the Antwerp Guild of Saint Luke.

#### Production and reproduction

Toward the end of the sixteenth century, the iconography of both the Guild and Saint Luke's was appropriated by Stradanus (1523-1605) and transformed into an image of workshop practices. Stradanus was born in Bruges and active in Antwerp, where he entered the Guild of Saint Luke around 1545.<sup>546</sup> After he moved from Antwerp to Florence, Stradanus designed the influential series of prints for his *Nova Reperta*, first published in Antwerp in 1591. This series of "new discoveries" celebrated the inventions of the time.<sup>547</sup> One of them is the invention of oil paint [Fig. 44], also known as *Color Olivi*. This invention was attributed to Jan van Eyck of Bruges, a myth created and perpetuated by Vasari's *Le Vite* that brought van Eyck international renown.<sup>548</sup>

Underneath the image in *Color Olivi* [Fig. 44] we read "*Colorem olivi commodum pictoribus, Invenit insignis magister Eyckius*" or "the famous master van Eyck discovered oil as a convenience for painters."<sup>549</sup> The engraving portrays a contemporary painter at work in the center, supposedly Jan van Eyck but perhaps a veiled reference to Stradanus himself,

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<sup>545</sup> Alternatively, the knight in Figure 47 and the knightly armor in Figure 41 could refer to Emmanuel Philibert (1528-1580), Duke of Savoy and Governor of the Spanish Habsburg Netherlands from 1555 to 1559.

<sup>546</sup> <http://vocab.getty.edu/page/ulan/500011304> (accessed April 8, 2020).

<sup>547</sup> Markey, *Renaissance Invention*, 25 & passim.

<sup>548</sup> See Vasari, *Le Vite* (Florence: 1550), 84: "*Fu una bellissima invenzione, & una gran' comodità all'arte della pittura, il trovare il colorito à olio; Di che fu primo inventore, in Fiandra Giovanni da Bruggia.*"

[https://archive.org/details/gri\\_vitedepivecc01vasa/page/n87/mode/2up](https://archive.org/details/gri_vitedepivecc01vasa/page/n87/mode/2up) (accessed October 28, 2020).

<sup>549</sup> Markey, *Renaissance Invention*, 17.

who was also from Bruges. The painter is working on a *Saint George and the Dragon* on canvas, rather than on panel, as would have been customary at the time of van Eyck.<sup>550</sup> Above the doorway, the coat of arms of the Antwerp Guild of Saint Luke is flanked by Minerva, a vessel, and a fragment of sculpture.

#### Painter's workshops

The contemporary workshop interior in *Color Olivi* [Fig. 44] shows the master painter surrounded by apprentices and journeymen, who had finished their apprenticeship of about four years.<sup>551</sup> On the left we see an image of Madonna and Child tucked away in the corner behind a portrait painter and his model, a subtle reference to Saint Luke. In the left foreground an apprentice draws the bust placed on the table in front of him. The middle apprentice is preparing a palette with paints for the master of the workshop. In the right foreground an apprentice is drawing eyes based on, and highlighting the importance of, observation. Two journeymen on the right are making oil paint by rubbing a mixture of binders, pigments and oil. A third journeyman is handling a support (canvas or panel) that had to be prepared with primers before paint could be applied.<sup>552</sup>

This description illustrates the general makeup of a painter's workshop around 1600.<sup>553</sup> Although there are still many uncertainties about specific workshops, it is clear that painters rarely produced works of art on their own in Antwerp. In addition to contracted assistance, large dynasties were formed through friendship and marriage.<sup>554</sup> Examples worth

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<sup>550</sup> Around 1500 (roughly a century after the death of van Eyck) canvas was introduced as a support medium in Venice. Advantages of canvas were larger dimensions, lower costs and greater portability. Painting on panel, however, never fell into disuse. See <http://visualizingvisions.com/> (accessed April 8, 2020).

<sup>551</sup> de Vries, "The Hand of the Artist," 86.

<sup>552</sup> Westgeest, *Kunsttechnieken in Historisch Perspectief*, 43 & 91–93.

<sup>553</sup> De Munck and Ridder-Symoens, "Education and Knowledge," 231.

<sup>554</sup> Honig, *Painting & the Market*, 110.

mentioning are the Brueg(h)el family [Fig. 273] and the Francken family [Fig. 263].<sup>555</sup> Instead of being led by an independent master painter, a workshop could also be headed by an art dealer functioning as a mass employer and marketing manager.<sup>556</sup> One of the products that emerged from such ventures is the *kunstkast* or display cabinet [Fig. 166] that combined a wide array of professions incorporated in the Antwerp Guild of Saint Luke.<sup>557</sup>

In Antwerp, the method of production often included collaboration within one workshop or between workshops.<sup>558</sup> This was partly due to increased forms of specialization and divisions of labor. For example, a painter specialized in figures (*staffage*) could collaborate with a painter specialized in landscapes. On the other hand, collaborations between renowned masters such as Brueghel I and Rubens can be understood as prestige projects in which the artists expressed their highly individual styles.<sup>559</sup> Comradeship and cooperation arose from the Guild system and the longstanding tradition of painter families doing business together. This resulted above all in economic and artistic benefits.<sup>560</sup>

#### Forms of imitation

Another practice that can often be observed is that of copying. Copies did not automatically come with the negative connotations often associated with them nowadays. Artists sometimes commissioned copies of their own works or made such copies themselves. The Dutch language of the early modern period has various terms to refer to copies, such as *copie* (from Latin *copia* meaning abundance), *counterfeit* or *ghecounterfeyt* [see Figs. 41 and

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<sup>555</sup> See for example <http://brueghelfamily.net/> (accessed October 29, 2020).

<sup>556</sup> Honig, *Painting & the Market*, 112–13.

<sup>557</sup> Baadj, "Collaborative Craftsmanship," 285 & 288.

<sup>558</sup> Honig, *Painting & the Market*, 172.

<sup>559</sup> Honig, 179–82 & 188; Woollett and van Suchtelen, *Rubens & Brueghel*, ix & 3–4.

<sup>560</sup> Honig, *Painting & the Market*, 184–85; Peeters, "The Guild of Saint Luke," 158.

47], *weerga*, and *nabeeld* or *nabootsel*.<sup>561</sup> Various forms of imitation can be discerned, which are indicated by the Latin terms *translatio*, *imitatio* and *aemulatio* derived from contemporary theories of artistic (literary and pictorial) imitation.<sup>562</sup>

*Translatio* or translation closely follows the original, or *principael* in Dutch, for learning purposes and to render the original more accessible (as in an exact copy).<sup>563</sup> The copy as *translatio* serves as a kind of eyewitness account based on direct observation. In addition to *naer het leven* or “after nature” (e.g. the portrait painter at work in Figure 44), observation could also occur *uyt den gheest* or “from the imagination” (e.g. the master painter at work in Figure 44).<sup>564</sup> The combination of observation and varying degrees of imagination resulted in either *imitatio* or *aemulatio*. The former, *imitatio* or imitation, allowed some freedom and creativity in interpretation. For example, van Mander recounts that in the workshop of Frans Floris I (1519-1570) a stock of head studies was kept that his pupils would combine with the bodies the master painter outlined in chalk.<sup>565</sup> Such practices resulted in the reappearance of certain types in numerous paintings.

Floris I also “imitated” his own work. His *Adam and Eve* of around 1560 exists in two variants [Figs. 201 and 202], both considered to be originals since Floris signed the works as their inventor and maker.<sup>566</sup> Two constcamer paintings [Cat. Nos. 67 and 111] display a copy of *Adam and Eve* as *imitatio* that is neither identical with Figure 201 nor with Figure 202. Since there is no tree trunk behind Eve, the picture-within-picture looks slightly more similar to Figure 201. The *imitatio* in these constcamers furthermore has a little more space on the

<sup>561</sup> Wouk, “From Nabeeld to Kopie,” 225.

<sup>562</sup> Muller, “Rubens’s Theory,” 229.

<sup>563</sup> Muller, 239; Wouk, “From Nabeeld to Kopie,” 225.

<sup>564</sup> Göttler, “Imagination,” 153; Wouk, “From Nabeeld to Kopie,” 238; Wood, “‘Curious Pictures’,” 332.

<sup>565</sup> Wouk, “From Nabeeld to Kopie,” 226–27; van Mander, *Het Schilder-Boeck*, part 4, fol. 242v.

<sup>566</sup> “FF.IN[venit].ET F[ecit].A[ntwerp].” See Wouk, “From Nabeeld to Kopie,” 226–29.

right side and a lot more space at the top but is still clearly derived from the works from Floris' workshop. In the background we can even discern an ostrich, cow, and lion, the composition of which differs from the two known paintings by Floris.

Imitation could ultimately result in *aemulatio* or emulation, in other words competing with or even surpassing the *principael* (or nature).<sup>567</sup> Originals could be accessible through drawings and prints, and in churches and private collections. The copy as *aemulatio* is the freest form of interpretation and could function as an homage to the creator of the original. In this context, historical awareness plays an important role. In the Low Countries, an interest in the local past among artists is thought to have emerged around 1500.<sup>568</sup> Whereas Quinten Metsys (1466-1530) [Fig. 266] was considered to be the father of Antwerp painting, Jan van Eyck (ca. 1390-1441) [Fig. 9] was regarded as the father of painting of the larger region of the Low Countries. His *Ghent Altarpiece* (1432) [Fig. 203] had gained widespread fame by the sixteenth century [Fig. 44].

Jan Gossaert (ca. 1478-ca. 1532) was certainly familiar with the altarpiece when he created his *Christ between the Virgin Mary and Saint John the Baptist* [Fig. 204] as a tribute (*aemulatio*) to the central panels of the *Ghent Altarpiece* [Fig. 203], possibly for Margaret of Austria.<sup>569</sup> Another famous sixteenth-century copy [Fig. 205] was made by Michiel Coxie I (1499-1592) at the request of Philip II.<sup>570</sup> According to van Mander, Philip II ordered this copy "so as not to rob the city of Ghent of its ornament."<sup>571</sup> The copy included changes with respect to the original, and can be regarded as a form of *aemulatio* that reinterprets and

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<sup>567</sup> Hopper, "A Munich Prayer Book," 100; Honig, *Painting & the Market*, 195–96.

<sup>568</sup> Wouk, "From Nabeeld to Kopie," 234.

<sup>569</sup> Wouk, 234.

<sup>570</sup> Wouk, 223 & 233.

<sup>571</sup> Van Mander, *Het Schilder-Boeck*, part 4, fol. 200v. Original in Dutch: "om de stadt van Ghent van dit luweel niet te berooven."

updates a masterpiece. The novelty of the historically distinguished copy of 1558 brought positive connotations and accolades. Coxie also made copies of works by Titian, the principal court painter of Philip II, in the Spanish Habsburg Netherlands, as Rubens would do a few decades later.<sup>572</sup>

Rubens made copies (as *translatio*, *imitatio*, or *aemulatio*) after numerous masters, including the Italians Leonardo, Mantegna, Raphael, Titian, Tintoretto, Veronese, the German Elsheimer who worked in Rome, and the Antwerpians Quinten Metsys and Pieter Bruegel I.<sup>573</sup> With the exception of Mantegna [Figs. 29 and 30], works by these artists are included as picture-within-picture in constcamer paintings [e.g. Cat. No. 42]. Of special note is Rubens' *Portrait of Paracelsus* (ca. 1617-1618), which he copied after an original by Metsys. One of them, and it is uncertain which one, is displayed in *The Picture Gallery of Cornelis van der Geest* [Cat. No. 9].<sup>574</sup> This constcamer painting furthermore depicts, among others, works of van Eyck (the now lost *Bathing Woman*), Metsys (*Madonna and Child* and *Portrait of a Scholar*), and possibly Coxie (the *Annunciation* and *Vision of Saint Peter*).<sup>575</sup>

In the seventeenth century, many Antwerp workshops are known for their copying practices. In addition to Rubens, prominent examples are Frans Francken II, whose father Frans Francken I was one of the pupils of Floris and continued similar workshop practices in the Francken family workshop, and Jan Brueghel II (son of Jan Brueghel I) and David Teniers II (son-in-law of Jan Brueghel I), who were both part of the Brueg(h)el family [Fig. 273].<sup>576</sup> More often than not, it is not known who made the copy. For example, Anthony van Dyck (1599-1641), a pupil of Rubens, painted *Achilles among the Daughters of Lycomedes* [Fig. 85]

<sup>572</sup> Wouk, "From *Nabeeld* to *Kopie*," 231–34; Muller, "Rubens's Theory," 240.

<sup>573</sup> Muller, "Rubens's Theory," 239.

<sup>574</sup> Marr, "Ingenuity and Discernment," 131.

<sup>575</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 128–29.

<sup>576</sup> Honig, *Painting & the Market*, 193.

while he was staying in The Hague (ca. 1628-1629).<sup>577</sup> At least five versions with slight variations were created in the course of the seventeenth century [Figs. 86 to 90]. Only in one case we know by whom, namely Jan Boeckhorst (1605-1668) [Fig. 90]. Van Dyck's invention is also reproduced in a constcamer painting [Cat. No. 34] (see chapter 12).

The copying of great masters was encouraged by contemporary artists and theorists such as Vasari, Lomazzo and van Mander.<sup>578</sup> In *Het Schilder-Boeck*, van Mander recounts the story of the contest between art and nature, or Pausias and Glycera (see chapters 4 and 5). Pausias had been a pupil of the most famed painter of antiquity, the “*Prince der Schilders*” Apelles.<sup>579</sup> The patron of Apelles was Alexander the Great, who was taught by Aristotle and afterwards founded Alexandria, home of the *Musaeum* (see chapter 4). Pausias had made a painting of Glycera wearing one of the garlands of flowers she made and sold. According to Pliny, this was “one of the very finest of his pictures [...] A copy of this picture, usually known as an ‘apographon,’ was purchased by L. Lucullus at Athens, during the festival of the Dionysia, at the price of two talents.”<sup>580</sup> Van Mander erroneously suggests that the copyist was a painter from Athens named “*Dionysium*.”<sup>581</sup> Nevertheless, the antique model for the copyist whose work was appreciated and bought by an art collector in the person of Lucullus, sanctioned both the production and trade of copies.

#### Printing press

The printing press enabled yet another form of copying. From the 1470s onwards, and as a result of “the extensive humanist school network and the presence of a university in

<sup>577</sup> <https://rkd.nl/explore/images/19944> (accessed October 30, 2020).

<sup>578</sup> Hopper, “A Munich Prayer Book,” 100–101.

<sup>579</sup> Van Mander, *Het Schilder-Boeck*, part 2, fol. 76v; Winner, “Die Quellen der Pictura-Allegorien,” 12 & passim.

<sup>580</sup> Pliny, *The Natural History*, 35.40.

<sup>581</sup> Van Mander, *Het Schilder-Boeck*, part 2, fol. 73r.

Leuven” and later Leiden (since 1575), printers, publishers and booksellers started up printing houses in the Low Countries.<sup>582</sup> Reading and writing skills were highly valued in Antwerp and in addition to the system of learning installed by the craft guilds, the accessibility of reads, and thus knowledge, printed by local presses at low interest rates significantly improved access to schooling for the city’s inhabitants.<sup>583</sup> The production of texts in the vernacular was stimulated and went hand-in-hand with the development of a vernacular humanism, mainly for the purpose of education.

In 1555 Christoph Plantin opened one of the most successful printing houses in Antwerp, the *Officina Plantiniana*. This functioned as a hub for Antwerp’s artistic and intellectual life.<sup>584</sup> The printing presses allowed replication on an unprecedented scale and was regarded as one of the great inventions of the fifteenth century by Stradanus.<sup>585</sup> In addition to the reproduction of text, printing presses also allowed for the swift multiplication of images especially in the form of engravings. Stradanus fittingly concluded his *Nova Reperta* with the discovery of engraving on copper and explained that sculptors carve figures on beaten sheets to reproduce (“*imprimit*”) them with a roller press.<sup>586</sup> In the sixteenth century, over 270 persons were active in Antwerp’s printing industry, which actively contributed to the local accumulation of knowledge and its distribution via commercial and maritime networks.<sup>587</sup>

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<sup>582</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 234.

<sup>583</sup> De Munck and Ridder-Symoens, 234–35.

<sup>584</sup> Timmermans, *Patronen van Patronage*, 238–39.

<sup>585</sup> Markey, *Renaissance Invention*, 7 & 55–60.

<sup>586</sup> Markey, 22 & 61–73.

<sup>587</sup> Davids, “Cities, Long-Distance Corporations,” 129–30.

## The Antwerp art market

Antwerp had a thriving port and was one of the richest cities of the sixteenth century, conveniently located on the banks of the river Scheldt that flows towards the North Sea. Inland the Scheldt connects Antwerp with cities such as Cambrai, Tournai and Ghent. Contemporary archival sources such as account books give insight into the local art market and its audiences. In addition to the archives of the Guild of Saint Luke, numerous Antwerp household inventories have been published from 1932 onwards. The first such publication by Denucé is limited to the paintings included in the inventories from the sixteenth and seventeenth centuries.<sup>588</sup> The inventories published between 1984 and 2009 by Duverger are mainly extracts and date from the seventeenth century.<sup>589</sup> The inventories show that art objects were kept throughout the house, instead of in a single room.<sup>590</sup> While such inventories do not correspond one-on-one to constcamer paintings, they do give an impression of the widespread interest in art in all layers of Antwerp society.<sup>591</sup>

### Places of exchange

According to guild regulations, artists could sell their works from their own studios as well as from *panden* in the fifteenth and sixteenth centuries. *Panden* probably originated as galleries around the courtyard of a cloister. In 1445 a *pand* opened at the Dominican

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<sup>588</sup> Denucé, *De Antwerpsche "Konstkamers"*; Scheller, "Rembrandt en de Encyclopedische Kunstkamer," 101.

<sup>589</sup> Duverger, *Antwerpse Kunstinventarissen: 1*; Duverger, *Antwerpse Kunstinventarissen: 2*; Duverger, *Antwerpse Kunstinventarissen: 3*; Duverger, *Antwerpse Kunstinventarissen: 4*; Duverger, *Antwerpse Kunstinventarissen: 5*; Duverger, *Antwerpse Kunstinventarissen: 6*; Duverger, *Antwerpse Kunstinventarissen: 7*; Duverger, *Antwerpse Kunstinventarissen: 8*; Duverger, *Antwerpse Kunstinventarissen: 9*; Duverger, *Antwerpse Kunstinventarissen: 10*; Duverger, *Antwerpse Kunstinventarissen: 11*; Duverger, *Antwerpse Kunstinventarissen: 12*; Duverger, *Antwerpse Kunstinventarissen: 13*; Duverger, *Antwerpse Kunstinventarissen: 14*.

<sup>590</sup> Dupré, "Trading Luxury Glass," 59.

<sup>591</sup> See especially "Probate inventories" in Rijks, "Catalysts of Knowledge," 18–24.

friary.<sup>592</sup> A second *pand* opened at the Cathedral of Our Lady in Antwerp in 1460.<sup>593</sup> By the mid-sixteenth century, however, these *panden* were replaced by the *schilderspand* or painters' gallery. This became the place to buy and sell paintings, located on the second floor of the New Bourse.<sup>594</sup> There is no visual record of the *schilderspand*, but it has been suggested that *The Confiscation of the Contents of a Painter's Studio* (ca. 1590) [Fig. 178] might depict such a *pand*. The image corresponds roughly to what is described in a contemporary inventory of a *winckel* or store, made after the death of Hans van Kessel (1533-1581) in 1581.<sup>595</sup>

Apparently, Hans van Kessel kept a stock of no less than 610 paintings in his stall at the *schilderspand*.<sup>596</sup> In addition, the inventory includes *constbladen* (perhaps drawings) and *papieren afteekeningen metter hant* (certainly drawings), *gedruckte beelden* or prints, and two *coperen plaetkens* or copper plates (perhaps engraved). This inventory confirms that artists had access to large amounts of pictorial material and that artists themselves could be involved in the market as art dealers. Van Kessel even owned printing presses and was therefore probably not only an artist and dealer but also a printer.<sup>597</sup>

The emergence of *panden* went hand in hand with the creation of artworks *on spec*, complementing the traditional creation of artworks on demand. The *schilderspand* closed its doors after 1603, which meant that the marketing of artworks no longer took place there. Since the luxury industries remained active, other outlets such as the painter's studio and specialized art dealer's shops became the places to trade such works.<sup>598</sup> Paintings created *on*

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<sup>592</sup> Vermeylen, *Painting for the Market*, 19–21.

<sup>593</sup> Vermeylen, 24–27.

<sup>594</sup> Vermeylen, 46 & 50–53; Göttler, Ramakers, and Woodall, "Trading Values," 15–16.

<sup>595</sup> <https://rkd.nl/explore/artists/494139> (accessed October 30, 2020); Vermeylen, *Painting for the Market*, 58–61. Hans was also known as Jan van Kessel.

<sup>596</sup> See Appendix 2 in Vermeylen, 61 & 194.

<sup>597</sup> Vermeylen, 61.

<sup>598</sup> Vermeylen, 118.

*spec* were not only intended to be sold locally, but also for export, most commonly to the Iberian Peninsula and from there on to the New World.<sup>599</sup>

Inexpensive works were preferred in Spain, and were consequently exported on a large scale. The paintings intended for this market were mostly cheap originals and copies after existing artworks. Dealers often ordered an original and a copy at the same time, which can be derived from the frequent occurrence of this practice in their account books. Artists like Jan Brueghel II adapted their production strategies accordingly. While copies of Brueghel II's works were sold in Spain, his originals usually stayed in Antwerp as models.<sup>600</sup> The paintings that flooded the market also catered to the tastes of local collectors and *liefhebbers*.

#### Appreciating the arts

The growing appreciation of the arts in sixteenth-century Antwerp will be illustrated by means of a single example. Nicolaes Jonghelinck (1517-1570) was a wealthy banker and a renowned Antwerp collector. The educated humanist owned both a suburban residence where he kept his collection, and a house within the city of Antwerp, the *Sphaera Mundi*.<sup>601</sup> The name of his house seems to be an explicit reference to *De sphaera mundi* (ca. 1230) by Johannes de Sacrobosco that appeared in numerous printed editions from the fifteenth century onwards.<sup>602</sup> At the very least, it reflects the breadth of Jonghelinck's intellectual aspirations.

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<sup>599</sup> Vermeylen, 7 & 82–83. For an extensive study on the seventeenth-century overseas painting trade, see especially "Transatlantic Art Trade Flows, 1630–80" (chapter 2.3) in Ginhoven, *Connecting Art Markets*, 46–60.

<sup>600</sup> Honig, *Painting & the Market*, 112–13; Barricelli, "Un'Allegoria di Jan Brueghel," 64–66.

<sup>601</sup> Wouk, *Frans Floris*, 332 & 347. Wouk calls the suburban villa a *musarum secessus* or retreat of the Muses.

<sup>602</sup> Cosgrove, "Images of Renaissance Cosmography," 61.

Jonghelinck commissioned *The Awakening of the Arts* [Fig. 101] or *Allegory of War and Peace*, created by Frans Floris I around 1560. This enormous canvas (161.9 by 238.7 cm) may depict the nine Muses, as Karel van Mander wrote in his *Het Schilder-Boeck*,<sup>603</sup> accompanied by a “tenth Muse” who draws or paints. Alternatively, the seven liberal arts are combined with the personifications of architecture, sculpture, and painting (also known as the three arts of *disegno*).<sup>604</sup> The seven liberal arts consist of the *trivium* of grammar, logic and rhetoric, and the *quadrivium* of arithmetic, geometry, music and astronomy.<sup>605</sup>

Of the ten female nudes in the foreground [Fig. 101], only the tenth Muse or the personification of painting is concentrated at work without signs of exhaustion. This presents the artist as active and perceptive while the other women are only just woken up by a male figure wearing a laurel wreath. He points to a group of figures in the right background, while in the left corner we see a landscape with Roman ruins, more specifically the Colosseum. The group of figures in the right background include another man, this time nude, while clothed females carry his helmet, sword, body armor, and shield as victories.

Centrally placed in the foreground is an open book displaying music scores of a French polyphonic chanson with the following lyrics: “*Le cruel mars faict qu'en long sommeiller / toute science a reposer s'efforce/ mais luy vaincu par prudence et par force/ le vray amy nous viendra resueiller.*”<sup>606</sup> This translates as “The cruel Mars [war] forces all sciences [the different branches of knowledge] to fall into a long slumber. But he has been defeated by prudence and by fortitude, and the true friend will come to awaken us.”<sup>607</sup> The

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<sup>603</sup> Van Mander, *Het Schilder-Boeck*, part 4, fol. 242r.

<sup>604</sup> Wouk, *Frans Floris*, 347.

<sup>605</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 233 & 240–41. Floris had already painted a monumental series of *The Liberal Arts* for Jonghelinck in 1557. See Wouk, *Frans Floris*, 327–30.

<sup>606</sup> Wouk, *Frans Floris*, 555–56.

<sup>607</sup> <https://vimeo.com/285702424> (accessed June 11, 2020); Wouk, 345.

man can thus be identified as the true friend of the arts and sciences, probably Mercury, while we see Mars disarmed in the background accompanied by the four Cardinal Virtues.<sup>608</sup>

The creation of *The Awakening of the Arts* [Fig. 101] is related to the Treaty of Cateau-Cambresis of 1559, which ended French military operations in the Spanish Habsburg Netherlands and inaugurated a short period of peace and prosperity. The theme of the *landjuweel*, a recurrent festival in which the chambers of rhetoric of the towns of the Duchy of Brabant were involved, held in Antwerp in 1561 was “what is it that awakens men to art?”<sup>609</sup> Floris’ contemporary masterpiece revives the antique notion that the arts flourish in times of peace.<sup>610</sup> However, a tiny figure in the brightly lit sky [Fig. 101], probably Mars still wearing his war attire, might indicate that the threat of war is always lurking. After all, the great Colosseum was in ruins by the time Floris visited Rome himself, and witnessed the remains of the once great Roman civilization with his own eyes.

#### Guild of Romanists

In addition to the Guild of Saint Luke, an elite confraternity was formed in 1572. The *Confratrum Collegij Romanorum apud Antverpiensis* or the Brotherhood of Saints Peter and Paul is also known as the Guild of Romanists. Only those who had visited Rome, where the tombs of both apostles are located, were eligible to enter into this exclusive guild.<sup>611</sup> One of its members was the bishop of Antwerp, for example, who joined the Brotherhood in 1597. In the same year Otto van Veen joined, followed by artists such as Jan Brueghel I in 1599,

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<sup>608</sup> See also Wouk, 345–46.

<sup>609</sup> Honig, *Painting & the Market*, 55–56; Van Bruaene, “The Theatrum,” 36.

<sup>610</sup> Wouk, *Frans Floris*, 348.

<sup>611</sup> Woollett and van Suchtelen, *Rubens & Brueghel*, 9; Honig, *Jan Brueghel*, 18.

Hendrik van Balen in 1605 (Brueghel I's neighbor), and Peter Paul Rubens in 1609.<sup>612</sup> Being both a Romanist and an artist meant access to relationship networks of Antwerp's urban elite, including for example the Antwerp branch of the Fugger family of traders from Augsburg.<sup>613</sup>

#### Patrons and collectors

Prominent learned Antwerp patrons and collectors of the arts from the late sixteenth and early seventeenth centuries are Charles III de Croÿ (1560-1612), Cornelis van der Geest (1575-1638), Peter Paul Rubens (1577-1640), Nicolaas Rockox (1560-1640), and Peeter Stevens (1590-1668).<sup>614</sup> The Flemish nobleman Charles III de Croÿ is of interest because he identified himself with Alexander the Great, patron of the great Apelles. In 1602, de Croÿ was furthermore compared to Lucullus, the art collector who bought a copy or *apographon* of Pausias' painting of Glycera. The main reason, however, was that Lucullus was also known as a Roman general who retired from war to become a scholar. De Croÿ similarly started out with a military career and later developed a passion for antiquity and collecting.<sup>615</sup>

Local collecting practices can be characterized as adhering to conservative Catholic ideals and aimed at upholding the cultural standards and traditions of Antwerp.<sup>616</sup> Van der Geest, for example, was a *kunstliefhebber* with a keen awareness of local history. The Archdukes Albert and Isabella visited his prestigious collection in 1615 [Cat. No. 9].<sup>617</sup>

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<sup>612</sup> Other romanists are Sebastian Vrancx and Frans Snyders. Honig, *Jan Brueghel*, 18, 141 & 151. For a more extensive list of members, see Timmermans, *Patronen van Patronage*, 305–6. Rubens birth coincided with the Feasts of Saints Peter and Paul, who had met in Antioch (the birthplace of Saint Luke). See <https://archive.org/details/historischeleven00mich/page/14/mode/2up> (accessed October 28, 2020).

<sup>613</sup> Timmermans, *Patronen van Patronage*, 244–45; Honig, *Jan Brueghel*, 18. Quiccheberg had been Hans Jakob Fugger's (1516-1575) librarian around 1560. See Jansen, *Jacopo Strada and Cultural Patronage*, 119.

<sup>614</sup> Honig, *Painting & the Market*, 189.

<sup>615</sup> Honig, *Jan Brueghel*, 116–19; Speth-Holterhoff, *Les Peintres Flamands*, 37–39.

<sup>616</sup> Honig, *Painting & the Market*, 191–92.

<sup>617</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 67.

Nicolaas Rockox was the mayor of Antwerp for the first time in 1603 and would be chosen eight more times to hold this position.<sup>618</sup> He kept his collections in his house *The Gulden Rinck* (The Golden Ring) [Cat. No. 33]. Rockox acquired de Croÿ's coins and published a catalogue of them after 1612.<sup>619</sup> The merchant Peeter Stevens owned the 1618 edition of van Mander's *Het Schilder-Boeck*, which he annotated himself, as well as Metsys' *Madonna and Child* (formerly owned by van der Geest) and the *Portrait of Cardinal Niccolò Albergati* [Cat. No. 41] by van Eyck, which he sold to Archduke Leopold Wilhelm in 1648.<sup>620</sup>

### Rubens

Rubens stands out as a collector because he was also an artist. As such, rather than commissioning works of art, he bought and made paintings intended to be kept in his own collection.<sup>621</sup> His collection included copies of paintings by Italian master (unobtainable originals) that he imitated himself, as well as copies of and originals by local masters from the fifteenth, sixteenth and seventeenth centuries.<sup>622</sup> Rubens' library included books by the ancients such as Aristotle's *De Caelo*, Cicero's *De Natura Deorum*, Vitruvius' *De Architectura*, Quintilian's *Institutio Oratoria*, and Iamblichus' *Vita Pythagorae*. He also owned books by his contemporaries such as Dürer's *Vier Bücher von Menschlicher Proportion* (Nuremberg: 1528), Cornelius Agrippa's *De Occulta Philosophia* (Antwerp: 1533), Gessner's illustrated works (probably the *Vogelbuch* (Zurich: 1557) or the *Icones avium*), Aldrovandi's works on

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<sup>618</sup> Speth-Holterhoff, *Les Peintres Flamands*, 20–21; Dupré, "Trading Luxury Glass," 62.

<sup>619</sup> Honig, *Jan Brueghel*, 117.

<sup>620</sup> Briels, "Amator Pictoriae Artis," 166 & 203–26; Speth-Holterhoff, *Les Peintres Flamands*, 14–19.

<sup>621</sup> Vander Auwera et al., *Rubens*, 80.

<sup>622</sup> Muller, *Rubens*, 11 & 15.

zoology (published in Bologna between 1599 and 1616), and François d'Aiguillon's *Opticorum Libri Sex* (Antwerp: 1613) for which he designed the title page [Fig. 235].<sup>623</sup>

Rubens as gentleman artist, diplomat and court painter to the Archdukes was the model for *aemulatio* for many Antwerp artists. The *pictor doctus* or learned painter articulated his artistic theory in a short essay entitled *De Imitatione Statuarum*. In this essay, Rubens discusses that in his age, which he typifies as a degenerate age equivalent to the classical Iron Age [Fig. 108], art surpasses nature by means of its idealized imitation.<sup>624</sup> The artist was in favor of selectively imitating nature (think of Zeuxis' Helen, see chapter 5), rather than sculpture, but is nevertheless best known for the collection of antique sculpture that he acquired, in exchange for some of his paintings, from Sir Dudley Carleton in 1618.<sup>625</sup>

This brief and simplified overview serves to illustrate the type of individuals, belonging to a cultural elite rather than the aristocracy, who resided in Antwerp and were active in its art market. In order to understand why Rubens would think of his age as a degenerate one, we will now turn our attention to the political and religious instabilities that characterized the city of Antwerp in the second half of the sixteenth century. The Iron Age [Fig. 108], as conceptualized by the ancients, entailed war, murder and plunder. Why this was seen as a fitting analogy is the subject of the next section of this chapter.

## Political and religious turmoil in Antwerp

In 1556 the Habsburg Netherlands became the Spanish Habsburg Netherlands. Subsequent events had a major impact on the prosperity of the city. These include the Iconoclastic Fury

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<sup>623</sup> Meganck, "Rubens on the Human Figure," 55–56; Muller, *Rubens*, 22–23; Kolb, *Jan Brueghel the Elder*, 85 (note 65). On the illustrated works by Gessner, see Baadj, *Jan van Kessel I*, 128; Rikken and Smith, "Jan Brueghel's Allegory of Air," 92.

<sup>624</sup> Meganck, "Rubens on the Human Figure," 62.

<sup>625</sup> Muller, *Rubens*, 39 & 82–87.

of 1566, the same year as the outbreak of the Dutch Revolt. A decade later Antwerp was sacked as a result of the Spanish Fury. Antwerp rebelled against Philip II as of 1579, and made Calvinism its official religion in 1581, the year that brought a second, “quiet” Iconoclastic Attack. The Fall of Antwerp in 1585 reinstated Catholicism and forced Protestants to either convert or emigrate.<sup>626</sup> In this section we will discuss these events in brief, and their impact on the Antwerp art scene in detail. The resulting ideological climate will be illustrated through contemporary pictorial and textual sources.

#### The Furies and their aftermath

In the early 1560s Antwerp’s industries and prosperity flourished, but “on account of the new preaching in 1566, art was at a standstill,” as van Mander put it.<sup>627</sup> It has been noted that even some artists took part in the Iconoclastic Fury of 1566.<sup>628</sup> The Antwerp Cathedral of Our Lady was the first target of the iconoclasts in their attempt to remove idols from places of worship, and to challenge the religious authority of the Catholic church.<sup>629</sup> The attacks left a trail of destruction [e.g. *Allegory of Ignorance* in Cat. No. 49].

The Spanish Fury of 1576 originated from the power vacuum that arose after the death of the then Governor of the Spanish Habsburg Netherlands, Luis de Requesens (1528-1576). During the confrontation between Spanish soldiers and mutineers, German mercenaries and the residents of Antwerp numerous houses were looted, civilians were killed, and buildings including the town hall were burned down.<sup>630</sup> After reaching its

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<sup>626</sup> Nijboer, Brouwer, and Bok, “The Painting Industries,” 94; Peeters, ““Den Quaden Tyt,”” 99–100.

<sup>627</sup> Van Mander, *Het Schilder-Boeck*, part 4, fol. 258r.

<sup>628</sup> Honig, *Painting & the Market*, 19.

<sup>629</sup> Voges, “Power, Faith, and Pictures,” 133–34; Vermeulen, *Painting for the Market*, 41; Honig, *Painting & the Market*, 24–29.

<sup>630</sup> Fagel, “The Origins of the Spanish Fury,” 103–21.

maximum of 104,000 inhabitants in 1568, these events triggered a flow of emigration from the city.<sup>631</sup>

The tyranny of the Furies was still fresh in the minds of Antwerp artists when *The Reversed World* [Fig. 128] was created in 1579, at the time of the rebellion against Philip II. The poet Willem van Haecht I (ca. 1527-ca. 1583/1593), an active member of the *Violieren*, was involved in composing the verses underneath, as well as in the publication of this print.<sup>632</sup> The globe [Fig. 128] is inscribed with “1576,” the year in which the sack of Antwerp took place. The globe is crowned with a cross and divided in three parts, presumably referring to the three classical continents known to humankind before the discovery of the New World. Underneath the print of 1579 we read that the world is held upside down by Tyranny and Hypocrisy while Fidelity and Love are asleep, as Time would tell.

The clockwork-like device on the far right [Fig. 128] indicates the date of creation of the print. The ring dial runs from 1566, the year in which the unrest in Antwerp started with the Iconoclastic Fury, to 1583. As the makers could not anticipate, Calvinists would initiate a Silent Iconoclasm in 1581.<sup>633</sup> Antwerp was then besieged by the Spaniards in the summer of 1584 and the city finally fell in August 1585.<sup>634</sup> Protestants fled in great numbers to the Dutch Republic where they were free to practice their religion.<sup>635</sup> This reduced the inhabitants of the city from roughly 80,000 in 1585 to about 42,000 in 1589. The closure of the Scheldt by the Protestants furthermore impeded a favorable business climate.<sup>636</sup>

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<sup>631</sup> Vermeylen, *Painting for the Market*, 40.

<sup>632</sup> <https://rkd.nl/explore/artists/112913> (accessed November 6, 2020).

<sup>633</sup> Peeters, “Den Quaden Tyt,” 109.

<sup>634</sup> Honig, *Painting & the Market*, 100–101.

<sup>635</sup> Nijboer, Brouwer, and Bok, “The Painting Industries,” 93 (especially Figure 3 based on ECARTICO).

<sup>636</sup> Vermeylen, *Painting for the Market*, 109–12.

### The world or macrocosm

Pictorial print culture remained in use in these tumultuous times to convey religious and political views. Such prints often emphasized the sorry state of the world or macrocosm. Similar in content to *The Reversed World* [Fig. 128] is the series entitled *Wrong Conviction Destroys the World* (ca. 1575-1581) [Figs. 123 to 126], which climaxes with *Wrong Conviction Leads the World to Hell* [Fig. 126]. In it we see the personification of “*Opinio*” or Opinion carry the world upside-down in a wheelbarrow towards a fiery hell. The folly of the world is also illustrated in the other three prints of this series [Fig. 123 to 125] in which the world is not represented as a globe, but as a man wearing the fool’s cap.

Similar criticism of the state of the world is illustrated in *The Topsy-Turvy World* [Fig. 127]. We see Democritus (ca. 460-ca. 370 BC) and Heraclitus (ca. 540-ca. 475 BC) on either side of a globe turned upside-down. The globe depicts a sinful world, about which Democritus would laugh and Heraclitus would cry. An earlier example of this theme is the print *Democritus and Heraclitus* [Fig. 167], invented by van Heemskerck and published by Cock in Antwerp in 1557. This time the world is represented with its right side up, but wearing a fool’s cap. This reference to vanity can be found in two constcamers [Cat. Nos. 98 and 145] as a picture-within-picture.

### The small world or microcosm

Even though times were troubling, this did not mean that artistic production came to a halt in Antwerp. This is attested, for example, by Laureis van Haecht Goitshoven’s *Mikrokosmos, Parvus Mundus* (Antwerp: 1579), published shortly after the Spanish Fury and dedicated to Rudolf II. The Holy Roman Emperor, member of the Austrian branch of the Habsburg dynasty [Figs. 260 and 261], was markedly less strict about faith than his uncle

Philip II, member of the Spanish branch of the Habsburg dynasty [Fig. 262], and numerous Antwerp artists would flee to Prague where they were received at Rudolf II's court. The humanist *Mikrokosmos* includes seventy-four prints with title, biblical reference, and explanatory text. The publication is thus similar in design to emblem books (see chapter 5).

The small world or *mikrokosmos* in ancient Greek, *parvus mundus* in Latin, refers to a human being. The words *kosmos* and *mundus* mean ornament or order, as opposed to chaos (see chapter 4).<sup>637</sup> The *parvus* part is modeled on Aristotle's *Parva Naturalia*, which deal with aspects of human nature. The *mikrokosmos* is also illustrated in the synoptic table *Ordo Universi* [Fig. 251], published in Antwerp in 1585. In the center of this print we see a human head inscribed with "*Homo qui ad universi ordinem conformatus dicitur mikrokosmos.*" As such man, configured by the order of the universe, was thought to reflect the world.<sup>638</sup>

This section will approximate the ideological and artistic climate of Antwerp on the basis of van Haecht Goidtsenhoven's *Mikrokosmos*. The title page [Fig. 175] of the emblem book shows in the border the four elements, represented by four animals. The chameleon for air, the salamander for fire, the mole for earth, and a fish for water. Centrally we see a globe, crowned by a cross, and surrounded by the four cardinal winds.<sup>639</sup> Within this globe a nude man is placed with his head surrounded by a similar globe with a cross on top. The large globe quite literally represents the macrocosm, with man inside as a microcosm. Based on this book, we will examine what kind of knowledge artists in Antwerp had at their disposal and how this influenced their views on the art of painting.

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<sup>637</sup> Kragh, *Conceptions of Cosmos*, 1.

<sup>638</sup> Saffrey, "L'Homme-Microcosme," 95.

<sup>639</sup> As a side note, Hieronymus Cock's [Fig. 25] publishing house was called *Aux Quatre Vents* (At the Sign of the Four Winds). See for example Barrett, "Boschian Bruegel, Brughelian Bosch," 2.

While little studied within the context of early modern Netherlandish pictorial culture, van Haecht Goidtsenhoven's *Mikrokosmos* enjoyed great popularity in his time and appeared in numerous editions. The original book in Latin was printed in Antwerp in 1579, again in Antwerp in 1592, in Arnhem in 1610, in Frankfurt in 1618, and again in Frankfurt in 1644. Furthermore, editions in the vernacular equally gained popularity. Translated in Dutch by Jan Moerman, *De Cleyne Werelt* (literally: The Small World) was published in Antwerp in 1584 and in Amsterdam in 1608.<sup>640</sup> In the Dutch Republic, Joost van den Vondel used the plates of *De Cleyne Werelt* in his *Den Gulden Winckel der Konstlivende Nederlanders*, first published in Amsterdam in 1613.<sup>641</sup> The idea of a “*winckel*” or store is intriguing in this context, staging the publication as a display of things of interest to Dutch art lovers.

In 1622, a second edition by van den Vondel appeared entitled *De Vernieuwde Gulden Winckel der Konstliebende Nederlanders*. Later editions followed at least in 1661, 1699, and 1718, this time entitled *Toonneel des Menschelyken Levens, of, De Vernieuwde Gulden Winkel*, all published in Amsterdam.<sup>642</sup> The idea of a “*toonnel*” or theater was common for book titles and refers to a place for seeing, a *theatron* or *theatrum* (see chapters 4 and 6). A similar metaphor was used for the German translation of the *Mikrokosmos*. The title became *Speculum Virtutum & Vitiorum, Heller Tugend und Laster Spiegel* and appeared in Frankfurt in 1619, a year after the Latin version was printed in the same city.<sup>643</sup> The Latin *Speculum* and German *Spiegel* both refer to the mirror or the alternative metaphor for the theater (see chapter 6). Another example is the English “*glasse*”

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<sup>640</sup> Praz, *Studies in Seventeenth-Century Imagery*, 427. For an online version of *De Cleyne Wereld* of 1608, please visit [https://www.dbnl.org/tekst/moer015cley01\\_01/moer015cley01\\_01\\_0001.php](https://www.dbnl.org/tekst/moer015cley01_01/moer015cley01_01_0001.php) (accessed June 12, 2020).

<sup>641</sup> Praz, 48.

<sup>642</sup> <https://archive.org/search.php?query=creator%3A%22Vondel%2C+Joost+van+den%2C+1587-1679%22&sort=date> (accessed June 12, 2020).

<sup>643</sup> <https://haab-digital.klassik-stiftung.de/viewer/resolver?urn=urn:nbn:de:gbv:32-1-10024499866> (accessed November 9, 2020).

as in William Cunningham's *Cosmographicall Glasse* (London: 1559), which is concerned with the macrocosm [Fig. 199] rather than the microcosm.

Lastly van Haecht Goidtsenhoven's *Mikrokosmos* was translated into French and published in Antwerp in 1589, and again in Antwerp in 1592, as *Mikrokosmos Parvus Mundus contenant divers tableaux de la Vie humaine*. Another edition entitled *Le Microcosme Contenant Divers Tableaux de la Vie Humaine* appeared in Amsterdam by the end of the seventeenth century, probably in 1682.<sup>644</sup>

The publication by Laureis van Haecht Goidtsenhoven (1527-1603), also known as Laurentius Haechtanus (Goidtsenhovius), or Laureis van Gotsenhoven, is highly original. The cartographer and engraver Gerard de Jode (ca. 1516-1591),<sup>645</sup> father-in-law of Jan Brueghel I and teacher of Jan Collaert II [e.g. Fig. 149], collaborated with Laureis to create the plates. It is uncertain if there is a relation between van Haecht Goidtsenhoven, Willem van Haecht I (ca. 1527-ca. 1583/1593) and Willem van Haecht II (1593-1637).<sup>646</sup> Willem van Haecht I was a poet, and is associated with the verses on numerous prints published in Antwerp [Figs. 102, 103, 104 and 128]. Since both were presumably born in the same year, it is unlikely that they were siblings. But the fact that they were operating in the same city in the sixteenth century must have meant that the two knew each other. The painter Willem van Haecht II was active in the seventeenth century and created numerous constcamer paintings [Cat. Nos. 8, 9, 15, 34, 45 and 55] in his role as curator of van der Geest's collection.<sup>647</sup>

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<sup>644</sup> Praz, *Studies in Seventeenth-Century Imagery*, 427.

<sup>645</sup> Also known as Geert de Jode, publisher of *Ordo Universi* [Fig. 251], who was registered as an art dealer in the Guild of Saint Luke in 1570. See <https://rkd.nl/explore/artists/42343> (accessed June 15, 2020).

<sup>646</sup> <https://rkd.nl/explore/artists/112913> (accessed June 12, 2020).

<sup>647</sup> Haecht is a municipality near Mechelen, where Laureis van Haecht Goidtsenhoven is thought to be born. Willem van Haecht I was born in Antwerp and registered at the Guild of Saint Luke in 1552. Van Haecht II was also born in Antwerp and died in the house of Cornelis van der Geest, called "De Keizer" (The Emperor) in the *Mattenstraat* in Antwerp in 1637.

Especially the last three emblems of the *Mikrokosmos* are related to the art of painting. To arrive at this topic, the publication starts with man as the microcosm (emblem 1), and the reign of Jupiter over the Silver Age (emblem 2) characterized by humans working the land [Fig. 169 (and 106)]. Jupiter is the Roman equivalent of the Greek Zeus, who together with Mnemosyne brought forth the nine Muses (see chapter 4). Emblem 4 shows the birth of Pallas Athena or Minerva, emerging from Jupiter's brain [Fig. 170]. The accompanying text explains that wisdom does not come from the flesh but is generated in the mind ("*Sapientia namque non ex carne fluit, mens pretiosa parit*").

The opposite of wisdom also features in the *Mikrokosmos*. Emblem 70 [Fig. 173] is entitled *Apulæus Transformatur in Asinum* and depicts how Lucius from Madaurus is accidentally transformed into an ass rather than a bird when trying to perform a spell. This refers to the novel by Apuleius, who was also known as Lucius Apuleius Madaurensis. His *Metamorphoses* (see chapter 4) became also known as *The Golden Ass* because of Saint Augustine (see chapter 5). The transformation was the result of Lucius' ignorance. In the emblem we see the fully transformed donkey being chased away from a stable by a farmer, which marks the start of Lucius' journey that ultimately leads to his return to human form by eating roses (representing prudence), as is shown in the background.

The biblical reference to Psalm 21 underneath the emblem of Apuleius [Fig. 173] emphasizes that he who does not understand is compared to a foolish beast and becomes one of them. In addition, the explanatory text characterizes anyone who does not praise wisdom (*sapientia*) as an ass. In conclusion, the following question is asked and left unanswered. "If the excellent rulers lack knowledge (*scientia*), are they not considered to be crowned donkeys?" The next emblem of the *Mikrokosmos* also refers to ignorance and

includes a representation of the stupidity of idolaters (*Idololatrae Stupiditas*), as an indictment against worshipping ephemeral things.

Subsequently the attention shifts from graven images to the *Inventor Picturae* or the inventor of pictures. A shepherd is credited with this invention, more specifically a Greek named Phidias, who is shown tracing the shadow of a sheep [Fig. 174]. It is interesting to note that this origin story deviates from Pliny's account. In his *Naturalis Historia*, Pliny stated the following.

We have no certain knowledge as to the commencement of the art of painting, nor does this enquiry fall under our consideration. The Egyptians assert that it was invented among themselves, six thousand years before it passed into Greece; a vain boast, it is very evident. As to the Greeks, some say that it was invented at Sicyon, others at Corinth; but they all agree that it originated in tracing lines round the human shadow.<sup>648</sup>

According to Quintilian, however, "the art of painting would be restricted to tracing a line round a shadow thrown in sunlight," without specifying what created that shadow.<sup>649</sup> The explication in the *Mikrokosmos* goes on to describe how this art was perfected by Apelles, who based his paintings on *disegno* or drawing.<sup>650</sup> It was again Pliny who said that Apelles let no day pass by, without drawing an outline, and thus leaving a remembrance.<sup>651</sup> The explanation of emblem 72 [Fig. 174] ends with Simonides' analogy between painting and

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<sup>648</sup> Pliny, *The Natural History*, 35.5.

<sup>649</sup> Quint. Inst. 10 2.7-8. Available in Latin via <http://data.perseus.org/citations/urn:cts:latinLit:phi1002.phil00110.perseus-lat1:2.7>; in English via <http://data.perseus.org/citations/urn:cts:latinLit:phi1002.phil00110.perseus-eng1:2.8> (both accessed November 9, 2020). See Muller, "Rubens's Theory," 231.

<sup>650</sup> [https://www.dbnl.org/tekst/moer015cley01\\_01/moer015cley01\\_01\\_0076.php](https://www.dbnl.org/tekst/moer015cley01_01/moer015cley01_01_0076.php) (accessed June 15, 2020).

<sup>651</sup> According to Erasmus the ensuing proverb reads "*Nulla dies abeat, quin linea ducta supersit.*" See Pliny, *The Natural History*, 35.36.

poetry (see chapter 4). The poet is described as a speaking painter, and the painter as a poet without language.

The next emblem of the *Mikrokosmos* is entitled *Ne Sultor Ultra Crepidam*.

Ultracrepidarianism refers to the saying that “a cobbler should stick to his last.” This story comes from Pliny’s *Naturalis Historia* and recounts the story of Apelles, who used to exhibit a completed work in a public place to passers-by, while concealing himself behind the picture. This way, he could overhear the criticisms of common people – the painter held public opinion in high regard. One day, a shoemaker noticed the representation of a shoe with one lace too little. The next day the error was corrected, and the proud shoemaker began to criticize the leg [Fig. 177]. This caused Apelles to show himself full of indignation to remind the cobbler that he should give no opinion beyond the shoes, a piece of advice which has passed into a proverbial saying.<sup>652</sup>

The last emblem of the *Mikrokosmos* revolves around Parrhasius and Zeuxis, who according to Pliny were involved in a contest.

[Zeuxis] represented some grapes, painted so naturally that the birds flew towards the spot where the picture was exhibited. Parrhasius, on the other hand, exhibited a curtain, drawn with such singular truthfulness, that Zeuxis, elated with the judgment which had been passed upon his work by the birds, haughtily demanded that the curtain should be drawn aside to let the picture be seen. Upon finding his mistake, with a great degree of ingenuous candour he admitted that he had been surpassed, for that whereas he himself had only deceived the birds [nature], Parrhasius had deceived him, an artist.<sup>653</sup>

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<sup>652</sup> Pliny, 35.36. Erasmus included this proverb in his *Adagia*.

<sup>653</sup> Pliny, 35.36. See also Carey, *Pliny’s Catalogue of Culture*, 110.

With his artifice, Zeuxis only fooled the birds (i.e. nature), while Parrhasius was able to fool Zeuxis (i.e. a human being) with his arts. The emblem entitled *Homines atque Volucres Picturis Decipiuntur* is accompanied by a verse from Ecclesiastes 9 (“*In manu artificum opera laudabuntur*”). This translates roughly as “In the hands of artists, works will be praised.” In this way the making of images was legitimized by the Bible.

#### The prospect of peace

At the time of the Fall of Antwerp (1585), Alexander Farnese (1545-1592) was the Governor of the Spanish Netherlands. Alexander was the great-grandson of Pope Paul III and grandson of Charles V. He is not to be confused with his uncle Cardinal Alessandro Farnese (grandson of Pope Paul III), whose connection with Giovio and collection at the Palazzo Farnese in Rome have been discussed in chapter 6. After his death in 1592, Alexander Farnese was succeeded by Peter Ernst I von Mansfeld-Vorderort as Governor for two years (1592-1594).

Subsequently Archduke Ernest of Austria (1553-1595), brother of Rudolf II and nephew of Philip II, briefly held the position of Governor of the Spanish Netherlands. He established a collection at the Palace of Coudenberg in Brussels, which was partly relocated to Rudolf II’s *Kunstkammer* in Prague after his death.<sup>654</sup> His arrival in the Spanish Habsburg Netherlands was marked by the traditional *Blijde Inkomst* or Joyous Entry, first in Brussels and then in Antwerp. Archduke Ernest’s entry into Antwerp is documented in Joannes Bochius’ *Descriptio publicae gratulationis, spectaculorum et ludorum, in adventu Sereniss. Principis Ernesti Archiducis Austriae* (Antwerp: 1595).<sup>655</sup> One of the prints shows the *Theater of Peace* [Fig. 179] inspired by the Colosseum. In it, the female visitors wearing a Brabantine

<sup>654</sup> Raband, “Collecting the Painted Netherlands,” 109–11 & 119–20.

<sup>655</sup> Van Bruaene, “The Theatrum,” 44–46.

*huik*, which is an ensemble of hat and cloak topped by the typical vertical pike to put the black *huik* on or take it off (see chapter 13).<sup>656</sup>

#### Archdukes Albert and Isabella

Albert VII became Governor of the Spanish Habsburg Netherlands after the death of his brother Ernest in 1595. In 1599, Albert married the daughter of Philip II, Isabella Clara Eugenia, and together they became sovereigns, rather than governors, of the Spanish Habsburg Netherlands until 1621. Their Joyous Entry into Antwerp took place in the same year as their marriage.<sup>657</sup> As is documented in Bochius' *Historica narratio profectionis et inaugurationis serenissimorum Belgii principum Alberti et Isabellae Austriae archiducum* (Antwerp: 1599), the triumphal entry also included the erection of a theater, this time one of war and peace.<sup>658</sup> The ephemeral stage was designed to turn from war to peace as the Archdukes walked by, explicitly expressing the hope for peace after the many years of confessional wars.<sup>659</sup>

On April 9, 1609, the Twelve-Year Truce was signed, which marked a new phase of commerce and wealth in the city of Antwerp. This treaty was signed in The Hague and brought with it the recognition of the independence of the Dutch Republic from the Spanish Habsburg Netherlands. To reinforce the distinction between the northern and southern Netherlands, the Archdukes instigated major efforts to “resurrect” the Catholic church in their territories.<sup>660</sup> As patron of both the arts and Counter-Reformation ideals the Archdukes

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<sup>656</sup> Colenbrander et al., *Netherlandish Fashion in the Seventeenth Century*, 25.

<sup>657</sup> Hortal Muñoz, “The Household of Archduke Albert,” 1040 & 1044.

<sup>658</sup> <http://hdl.handle.net/10934/RM0001.COLLECT.452350> (accessed November 10, 2020).

<sup>659</sup> Van Bruaene, “The Theatrum,” 44–45; Raband, “Collecting the Painted Netherlands,” 115 & 119.

<sup>660</sup> Honig, *Painting & the Market*, 101–2; Ginhoven, *Connecting Art Markets*, 73; Woodall and Porras, *Picturing the Netherlandish Canon*, 45; Zuidervaart, “The ‘True Inventor,’” 12.

supported the construction of a new Jesuit Church in Antwerp (1615-1621). By then the Jesuit Order had already gained prominence in Antwerp.<sup>661</sup>

### Jesuit image theory

The Council of Trent had already addressed the question of the relationship between the Catholic church and the pictorial arts during its final session in 1563. The didactic purpose of images was confirmed, and the Counter-Reformation view established that the beholder should be able to sympathize with religious imagery.<sup>662</sup> Ignatius of Loyola (1491-1556) was a strong advocate of this view, and one of the founders of the Society of Jesus. In 1540, the Order received the approval of Pope Paul III, a notable member of the Farnese family.<sup>663</sup> Ignatius is well known for his *Exercitia Spirituality* (Rome: 1548) or spiritual exercises aimed at visualizing biblical and other pious events in great detail.<sup>664</sup>

The Jesuits, with their strong affinity for visual rhetoric and the imagination [e.g. Fig. 251], established their college in Antwerp in 1574.<sup>665</sup> In Brussels, another Jesuit College would open in 1604. The education system of the Society of Jesus was promoted by yearly *affixiones* or “open days” of the colleges. On this occasion, emblems created by the students were exhibited at the colleges or in the Antwerp Jesuit Church.<sup>666</sup> Rubens was responsible for the decoration of this Church’s ceiling (1620-1621), a prestige project comprising thirty-nine paintings (lost due to a fire in 1718). Some of these paintings are reproduced on the

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<sup>661</sup> Lombaerde, *Innovation and Experience*, 15 & 19; Rijks, “Catalysts of Knowledge,” 118 & 306. The Jesuit Church was initially named the Saint Ignatius Church, after the founder of the Order. When the Order was abolished in 1773, the church was renamed as the Saint Charles Borromeo Church.

<sup>662</sup> Laarhoven, *De Beeldtaal van de Christelijke Kunst*, 231–40; Bertram, “Elevating Optics,” November 29, 2016, 220.

<sup>663</sup> Laarhoven, *De Beeldtaal van de Christelijke Kunst*, 265.

<sup>664</sup> Laarhoven, 232.

<sup>665</sup> Meskens, “The Jesuit Mathematics School,” 11.

<sup>666</sup> Porteman, *Emblematic Exhibitions*, 9–11; Mochizuki, “Art, Controversy, and the Jesuits,” 488; Rijks, “Catalysts of Knowledge,” 273.

ceiling in the constcamer painting the *Art Cabinet with "Candaules and Gyges"* [Cat. No. 10].<sup>667</sup>

According to the well-known Jesuit Johannes David (ca. 1545-1613), images were an instrument of devotion, licensed by Christ himself. David's *Duodecim specula Deum aliquando videre desideranti concinnata* [Fig. 236] was published in Antwerp in 1610.<sup>668</sup> The book introduces twelve "mirrors" (see above and chapter 6) arranged for the use of those who desire at length to see God. The twelve emblems are explained by *Desiderius* (Desirous of God) in order to teach *Anima* (Soul) how the mirrors should be used. The mirrors allow for various degrees of introspection, leading from the contemplation of the everyday (*speculum commune*) all the way to beatific vision, catching a glimpse of the divine.<sup>669</sup>

David's *specula* or mirrors are thus closely related to classical concepts of *theoria* and *contemplatio* (see chapter 4). Both the eyes of the body (i.e. physical sight) and the eyes of the mind (i.e. metaphysical sight) contribute to spiritual ascent and "seeing" God. *Desiderius* clarifies that even though human beings can never get a real vision of God, we should always look at the mirror of His wonders ("*speculum illud mirabilium Dei*" [explanation of Fig. 239]).<sup>670</sup> Wonder in this context leads to theological contemplation [e.g. Fig. 13], appointed by Aristotle as the first philosophy. Such ideas are also reflected in the emblem *Capit quod non Capit* [Fig. 195], created by another Antwerp Jesuit in 1636 (see chapter 5). Hesius similarly introduces a kind of mirror through which the mind can grasp divine matters.

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<sup>667</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 107; Martin, *The Ceiling Paintings*, see especially "The building of the 'marble temple' and the 'brave pictures of Rubens making.'"

<sup>668</sup> Clark, *Vanities of the Eye*, 25; Brusati, Enenkel, and Melion, *The Authority of the Word*, 22.

<sup>669</sup> Brusati, Enenkel, and Melion, *The Authority of the Word*, 24.

<sup>670</sup> <https://archive.org/details/duodecimspeculad00davi/page/113/mode/2up> (accessed November 10, 2020); Brusati, Enenkel, and Melion, 30–31.

The second mirror of David's *Duodecim specula*, however, is the "*speculum fallax*" or deceptive mirror. It shows, *inter alia*, a painter behind his easel who sees an angel, but paints a demon (C. "*Fallitur, pro angelo daemonem pingens*") [Fig. 237]. The accompanying discussion about this aspect of the emblem highlights that through dedication one can know the difference between prudence and learning, on the one hand, and mistakes and folly, on the other. This made Desiderius realize that there is an advantage to wisdom above folly, just as light excels darkness.<sup>671</sup> An informed view is thus required.

The mirror of creation ("*speculum creaturarum*") is the eight mirror and illustrates early modern ideas on the world or nature as the mirror of the divine particularly well. The visible enables the beholder to contemplate the invisible ("*A.B.C. Invisibilium per visibilia contemplatio*") [Fig. 238]. This seems to resonate with the painted inventories of the natural world [e.g. Fig. 194] that Jan Brueghel I started to create from 1594 onwards (see chapter 6). As an alternative to reading the Bible (David's "*speculum s. scripturae*") [Fig. 239], one could read the "book of nature."<sup>672</sup> Studying the natural world equaled studying its Creator. Both "books" have in common that their contents are perceived through the eyes.

The importance of the sense of sight for the acquisition of knowledge has already been discussed extensively in the previous chapters and illustrated through the *Ordo Universi* [Fig. 251], which was created under Jesuit patronage. The Aristotelian framework for the understanding of cognition remained prominent in Antwerp, as is furthermore attested by the optical theory of the Jesuit François d'Aiguillon. His book *Francisci Aiguillonii e Societate Iesu Opticorum libri sex* (Antwerp: 1613) contains illustrations designed by Rubens

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<sup>671</sup> <https://archive.org/details/duodecimspeculad00davi/page/18/mode/2up> (accessed November 10, 2020).

The full quote in Latin: "*Dedique cor meum, ut scirem prudentiam atque doctrinam, erroresque & stultitiam. Et vidi, quod tantum praecederet sapientia stultitiam, quantum differt lux a tenebris.*"

<sup>672</sup> See especially "De interpretatie van het Boek der Natuur tot circa 1660" (chapter 2) in Jorink, *Het "Boeck der Natuere,"* 45–113.

and executed by Theodor Galle.<sup>673</sup> Galle was also responsible for the engravings in the *Duodecim specula*, and both books were published by the *Officina Plantiniana*.

In the *Opticorum libri sex*, d'Aiguillon maintained the Aristotelian notion that sight is the first of the senses because it “best helps us to know things, and reveal many distinctions” (see chapters 4 and 5).<sup>674</sup> By citing Aristotle, Ripa also stressed in his *Iconologia* that sight helps us to bring obscure things to light by means of the intellect.<sup>675</sup> Even though Johannes Kepler (1571-1630) proposed a revolutionary optics of light as early as 1604, Jesuit scholars adhered to a geometrical optics of human vision. D'Aiguillon's theory proposed three stages of induction, related to the “the triple mode through which creatures come to know God.”<sup>676</sup> The first is direct vision (“*directa*”) that takes place face to face. The second is reflection (“*repercussa*”), the kind of indirect vision David promotes in his *Duodecim specula*. As d'Aiguillon explains, “through faith we see God in the created things as in a kind of mirror” [compare Fig. 238].<sup>677</sup>

The third stage of induction is infraction (“*infractam*”) or the transmission of the appearance (“*species*”) of things to the eye.<sup>678</sup> This infraction establishes the connection between the *mundus sensibilis* and the *mundus intelligibilis* (see chapter 5). In *De Anima*, Aristotle had already asserted that “no one can learn or understand anything in the absence

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<sup>673</sup> Theodor was the son of the artist and publisher Philip Galle [e.g. Fig. 44]. Philip was a pupil of Dirck Volckertsz. Coornhert [e.g. Fig. 27]. See <https://rkd.nl/explore/artists/30045> (accessed November 11, 2020).

<sup>674</sup> Aristotle, *Metaphysics*, 1.980a; Gal and Chen-Morris, “Empiricism Without the Senses,” 138. For an extensive discussion of the title page of the *Opticorum libri sex*, see Bertram, “Elevating Optics,” 212–42.

<sup>675</sup> Ripa, *Iconologia*, 447.

<sup>676</sup> Quote by d'Aiguillon, *Opticorum libri sex*, fol. 3r (“Lectori S.”) translated in Gal and Chen-Morris, “Empiricism Without the Senses,” 133.

<sup>677</sup> Quote by d'Aiguillon, *Opticorum libri sex*, fol. 3r-v (“Lectori S.”) translated in Gal and Chen-Morris, 133. <https://archive.org/details/francisciaguilon00agui/page/n20/mode/2up> (accessed November 12, 2020).

<sup>678</sup> D'Aiguillon, *Opticorum libri sex*, fol. 3v (“Lectori S.”) via <https://archive.org/details/francisciaguilon00agui/page/n21/mode/2up> (accessed November 12, 2020); Dupré, “The Return of the Species,” 478 & 481.

of sense.”<sup>679</sup> This Peripatetic axiom was later adopted by Thomas Aquinas (1225-1274), and promoted in the sixteenth century by the Bolognese Aristotle (Aldrovandi), among others.<sup>680</sup> Knowledge in Aristotelian terms (see chapters 2 and 4) could be derived from numerous particular experiences. Gaining experience depended on memory, and images were thought to enable (spiritual) memory. The image theory and education system of the Jesuits was based on this intellectual framework.<sup>681</sup>

#### Practicing the art of memory

While the relationship between images and memory as established in classical antiquity was generally accepted, the rhetorical art of memory (see chapter 4) met with criticism in the Spanish Habsburg Netherlands by the end of the sixteenth century. The humanist Lambert Thomas Schenkel (1547-after 1624) was a practitioner of the method intended to improve memory based on *loci* and *imagines*, first in Antwerp and then in Leuven. However, his practice was persecuted twice on the suspicion of magic and superstition. The second time he was censured, Schenkel moved to Douai, where a university was founded by Philip II in 1559.<sup>682</sup> In his *De memoria libri duo* (Douai and Antwerp: 1593) and *Gazophylacium artis memoriae* (Strasbourg: 1610), which translates as *Treasury of the art of memory*, Schenkel described his method in a deliberately cryptic style.<sup>683</sup>

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<sup>679</sup> Aristotle, *De Anima*, 432a8; <https://psychclassics.yorku.ca/Aristotle/De-anima/de-anima3.htm> (accessed November 12, 2020).

<sup>680</sup> “Nothing is in the intellect that was not first in the senses.” See Aquinas, *Disputed Questions on Truth*, q. 2 a. 3 arg. 1; Hobart, *The Great Rift*, 55; Kolb, *Jan Brueghel the Elder*, 61; Findlen, *Possessing Nature*, 206. A German, revised edition of the *Iconologia* (1669) refers to this axiom underneath *Erkandtnuß* or *Sapienza* [Fig. 245], see Bertram, “Elevating Optics,” 226.

<sup>681</sup> Dupré, “The Return of the Species,” 476–77.

<sup>682</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 220.

<sup>683</sup> Jorink and Ramakers, *Art and Science*, 261–62; Mertens, *Magic and Memory*, 80–86.

Schenkel's persecution was the result of the *Edictum regium ut ecclesiastici et saeculares iudices omni modo adnitantur extirpare superstitiones et magias* issued by Philip II in 1592.<sup>684</sup> Even though certain forms of artificial memory were not tolerated, this did not alter the views on memory in general. *Sensibilia* or sense perceptions were thought to end up as *phantasmata* or *imagines* (d'Aiguillon's *intelligibilia*) in the faculty of memory. As such *species* were considered essential intermediaries for the acquisition of knowledge.<sup>685</sup> This classical view persisted in seventeenth-century Antwerp.

## Summary: tradition and continuity

The Antwerp Guild of Saint Luke united an extensive range of “makers” including artists, art dealers, art lovers, and rhetoricians. The solidarity of its members resulted in close partnerships and collaboration within workshops and between workshops. A frequently employed practice in Antwerp workshops was that of copying. Paintings were reproduced not only to meet the high demand, but also for educational purposes, to demonstrate historical awareness, and to glorify artistic genius. Precursors of this practice were found in classical antiquity, while contemporary printing presses made it possible to multiply text and images on an unprecedented scale.

Paintings and other works of art were made on demand and *on spec* for local trade and export. A visit to Rome was a prerequisite to belong to the cultural elite of Antwerp, of which artists were also part. Rubens would become the most accomplished artist of them all

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<sup>684</sup> Mertens, *Magic and Memory*, 81–82. The mnemotechnics of Ramon Llull (ca. 1232–ca. 1315/16) and his followers therefore fall outside the scope of this research.

<sup>685</sup> D'Aiguillon, *Opticorum libri sex*, 103 (book 1) via <https://archive.org/details/francisciaguillon00agui/page/103/mode/2up> (accessed November 12, 2020); Dupré, “The Return of the Species,” 484.

and distinguished himself by means of his collection, including a library, and his learnedness. Local patronage of collectors is characterized by an interest in Italy and the former Roman empire, on the one hand, and in Antwerp's art production and its history and traditions, on the other. The port city, however, experienced a tumultuous time in the second half of the sixteenth century, which only came to an end with the Twelve-Year Truce (1609) during the reign of the Archdukes Albert and Isabella.

Despite the political and religious, and therefore economic and commercial, setbacks resulting from the formation of the Spanish Habsburg Netherlands, a ceaseless production of visual material took place in Antwerp reflecting the perceived understanding of the world or macrocosm as well as the place of the human being or microcosm within it. The Counter-Reformation reinstated images as instruments for introspection and devotion. The Jesuits in particular were a prominent local force that adhered to classical conceptions of optics and the functioning of images. Although the latest developments in science were accessible, they were not immediately accepted in such Counter-Reformist milieus where a Christian-Aristotelian worldview continued to prevail.

## 8 Scholarship in the Duchy of Brabant

The question of what was unique about the Antwerp conditions that provided fertile ground for the development of the constcamer genre will be broadened in this chapter to include the larger region of the Duchy of Brabant. Characteristic of this region was the extensive network of humanist schools. Chambers of rhetoric, such as the *Violieren*, also played an important role in the instruction of the uneducated and aimed primarily at transforming their members into eloquent individuals. The *trivium* of grammar, logic, and rhetoric served to improve the reading, writing, and pronunciation skills of their members.<sup>686</sup> Together with the *quadrivium* of arithmetic, geometry, music, and astronomy, they constitute the seven liberal arts.<sup>687</sup>

In the early modern period, the art of painting was increasingly considered a liberal art. Van Mander famously opened his *Het Schilder-Boeck* with the following statement.

*De seer vermaecklijcke vernuft-barende edel Schilder-const, natuerlijcke Voedster van alle deughtsaem Consten en wetenschappen (ghelijck den letter-condigen Gheleerden ghenoegh kenlijck is) was by ben meesten Heeren, en hoogh-gheleerden, oyt in seer hoogher eeren en weerden: lae by den ouden wijsen Griecken in sulcken aensien, dat syse ten tijde van den constighen Schilder Pamphilus, by den anderen vrye Consten in ghelijcken graet oft plaetse der eeren stelden.*<sup>688</sup>

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<sup>686</sup> De Munck and Ridder-Symoens, "Education and Knowledge," 240.

<sup>687</sup> De Munck and Ridder-Symoens, 241.

<sup>688</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4r; Winner, "Die Quellen der Pictura-Allegorien," 46.

He counted painting – the nurturer of all virtuous arts and sciences – among the liberal arts and noted that the art of painting is rooted in the *Teycken-const* (literally: Sign-art) or the art of drawing (*disegno*).<sup>689</sup> As such, the art of painting entered the ranks of the liberal arts, becoming one of the branches of knowledge with substantial educational potential.

Painters themselves needed knowledge in a wide range of domains, including perspective or geometrical optics, anatomy, physics, and chemistry in order to prepare ground layers and create images on top of a wooden panel, a canvas, or a copper plate.<sup>690</sup> Artistic training took place in the workshop (see chapter 7), which was also the venue for learning in the fields of engineering, surveying, cartography, and navigation.<sup>691</sup> The arts and sciences were closely interconnected at the time, as is evident from contemporary guild systems as well as the eminently liberal nature of the constcamer genre.

Within the Duchy of Brabant, the two cities that stand out as centers of knowledge production are Leuven, with its university, and Antwerp, where numerous scholarly treatises were printed. In addition, these cities were the main centers for the development and production of scientific instruments, especially in the sixteenth century.<sup>692</sup> The widespread passion for letters (languages) and a love for study brought forth numerous *wetenschappers* or scholars.<sup>693</sup> This chapter discusses several prominent regional academics and humanists, their contributions and philosophical outlooks, and their relationships to the arts.

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<sup>689</sup> “*De Schilder-const, die in de Teycken-const bestaet, is de Voedster van alle goede Consten ende wetenschappen.*” Van Mander considers the art of writing, *grammatica* or grammar, also based on the *Teycken-const*. See van Mander, *Het Schilder-Boeck*, part 1, chapter 2, fol. 8v; Beijer, Lemmens, and Taverne, *Het Schildersatelier*, 41; De Munck and Ridder-Symoens, “Education and Knowledge,” 233.

<sup>690</sup> Wallert, Hermens, and Peek, *Historical Painting Techniques*, 2 & passim; De Munck and Ridder-Symoens, “Education and Knowledge,” 234 & 239.

<sup>691</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 233. See also chapter 9.

<sup>692</sup> Michel, “The First Barometer,” 88.

<sup>693</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 239.

## Academics at the University of Leuven

The University of Leuven was founded in 1425 and turned the city into an important intellectual center.<sup>694</sup> The statutes of the university, dating from 1567 (or 1568) and 1639, specified that “the curriculum should adhere to the writings of Aristotle.”<sup>695</sup> The study of Aristotle’s philosophy was required of every university student, which explains its dominance in regional humanist thought. Someone schooled in natural philosophy or *physica* (i.e. nature) was commonly referred to as a physician (e.g. Samuel Quiccheberg). What these scholars have in common is the multifaceted nature of their training and practices.<sup>696</sup> This section features some of the most distinguished scientists associated with the University of Leuven.

### Erasmus

A sophisticated scholar who was temporarily active at the University of Leuven in the early sixteenth century is Erasmus (1466-1536). His portrait by Holbein [Fig. 18] (see chapter 6) was preceded by his portrait as the scholar Jerome of 1517 [Fig. 266] by Quinten Metsys.<sup>697</sup> One of the proverbs from Erasmus’ *Adagia* (Paris: 1500) is represented in the constcamer painting *Interior of a Picture Gallery* [Cat. No. 104]. A pair of mottoes can be found in a cartouche placed above the central painting of a *Holy Family with Saint Elizabeth*, and reads “*Nihil est ab omni parte beatum / ne Jupiter quidem omnibus placet.*”<sup>698</sup> The second part is taken from the *Adagia*, and translates as “Not even Jupiter can please everyone.”<sup>699</sup> Erasmus

<sup>694</sup> Van der Stock, *In Search of Utopia*, 80.

<sup>695</sup> Berger, *The Art of Philosophy*, 36.

<sup>696</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 250; Cosgrove, “Images of Renaissance Cosmography,” 60.

<sup>697</sup> Van der Stock, *In Search of Utopia*, 130–39.

<sup>698</sup> Marr, “Ingenuity and Discernment,” 114–15.

<sup>699</sup> This reminded me of Lindsay’s slogan, “Your formula for failure is to try to please everybody.” See chapter 3.

was in touch with a large network of learned humanists, including Giulio Camillo and Pieter Gillis (1486-1533), who was portrayed concurrently by Metsys (see chapters 5 and 7).<sup>700</sup>

### Frisius

One of the most prominent scholars active in Leuven was Gemma Frisius (1508-1555). He was born in Friesland in the northern Netherlands, and studied at the University of Leuven from 1525 onwards. Frisius received his degree in 1536 and continued his career at the university. He held the chair of medicine and was the personal physician of Charles V.<sup>701</sup> The works of Aristotle were formative for the practice of medicine. In addition, Galen's works on anatomy and medicine stressed the interrelatedness between celestial influences (macrocosm) and the human body (microcosm). Many scholars were thus skilled as physicians, while also exploring nowadays distinct branches of knowledge, such as mathematics, philosophy, and cosmography.<sup>702</sup>

Around 1540-1545, Maerten van Heemskerck portrayed Frisius pointing to a globe decorated with the four seasons, which he supports with his left hand [Fig. 40].<sup>703</sup> A second portrait of Frisius has come down to us in the form of an etching [Fig. 48] that represents Frisius at the age of 47, the year of his death. This time he is represented as a scholar in his study [see also Fig. 49] holding a celestial globe, and is surrounded by books and scientific instruments, such as armillary sphere, astrolabe, quadrant, dividers, compass with straight screw [see also Cat. No. 73], and his own version of the *annulus astronomicus* or ring-dial.<sup>704</sup>

<sup>700</sup> Briels, "Amator Pictoriae Artis," 142.

<sup>701</sup> Van der Stock, *In Search of Utopia*, 69 & 332–35; Lindgren, "Land Surveys," 501.

<sup>702</sup> Cosgrove, "Images of Renaissance Cosmography," 60. Frisius' son, for example, would become chair of medicine or the "*Artem parvam Galeni*" in 1569, see Nouhuys, *The Age of Two-Faced Janus*, 163.

<sup>703</sup> Van der Stock, *In Search of Utopia*, 335.

<sup>704</sup> Gessner, "The Use of Printed Images," 144–48; Mosley, "Sundials and Other Cosmographical Instruments," 2019, 71; Van Cleempoel, *A Catalogue Raisonné*, 9–11.

Frisius is well known for his editions of Peter Apian's *Cosmographicus Liber*, first published in Landschut in 1524. Apian (1495-1552) originated from Saxony and would become Charles V's court mathematician in 1540. Of the at least forty-one editions of Apian's book that appeared between 1524 and 1609, about thirty-three were published in Antwerp.<sup>705</sup> The annotated edition of the *Cosmographicus Liber* by Frisius was published in Antwerp as early as 1529.<sup>706</sup> In addition to producing scientific treatises, Frisius created globes and astronomical instruments, as shown in his portrait [Fig. 48]. In his *Libellus de locorum describendorum ratione* (first published in Antwerp in 1533), Frisius was the first to describe the method of triangulation used in surveying [Fig. 182].<sup>707</sup> The subject of trigonometry was subsequently taken up by instrument makers such as the Antwerp-based Coignet family, to which we will return below.

In *De radio astronomico & geometrico liber* (Antwerp & Leuven: 1545), Frisius introduced the principle of the *camera obscura*.<sup>708</sup> It is the first printed illustration of such a "device" [Fig. 252], which was used to observe the solar eclipse of 1544.<sup>709</sup> Kepler actually coined the term *camera obscura*, and tried to explain how it worked, in his *Ad vitellionum paralipomena* (Frankfurt: 1604).<sup>710</sup> Frisius, in his treatise of 1545, mainly discussed the use of the cross-staff in geography, optics, geometry, and mathematics. The cross-staff as a perspective aid for architects and painters ("*Architectus aliquis, aut pictor*") is also illustrated with a print in the form of a woodcut [Fig. 253].<sup>711</sup>

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<sup>705</sup> Vanden Broecke, "The Use of Visual Media," 132.

<sup>706</sup> Available online via [https://archive.org/details/cosmographicusli00apia\\_0](https://archive.org/details/cosmographicusli00apia_0) (accessed June 16, 2020).

<sup>707</sup> Meskens, *Practical Mathematics*, 89 & 162–65; Lindgren, "Land Surveys," 483; Vanden Broecke, "The Use of Visual Media," 138.

<sup>708</sup> De Munck and Ridder-Symoens, "Education and Knowledge," 250.

<sup>709</sup> Available online via <https://archive.org/details/gemmaefrisiimedi00gemma> (accessed August 26, 2020).

<sup>710</sup> <https://www.sophiararebooks.com/pages/books/4956/reinerus-gemma-frisius/de-radio-astronomico-geometrico-liber-in-quo-multa-quaer-ad-geographiam-opticam-geometriam> (accessed August 26, 2020). See also Gessner, "The Use of Printed Images," 131.

<sup>711</sup> Gessner, 132–37.

The *camera obscura* and cross-staff are clear examples of the crossovers between *episteme* and *techne*, *scientia* and *ars*, *wetenschap* and *const*, or knowledge and skill or art (see chapters 4 and 5). Such devices were created and sometimes also used by the same local scientific and artistic community. An exquisite example is the geographical astrolabe [Fig. 267] created by Gillis Coignet the Elder (before 1526-1562/63), a member of the Antwerp Guild of Saint Luke. Gillis made this brass astrolabe after Apian's paper instrument, the *speculo cosmographico* or cosmographic mirror included in *Cosmographicus Liber* (the front) and later editions annotated by Frisius (front and back).<sup>712</sup> Published in Antwerp, local artists could equally have had access to *De radio astronomico & geometrico liber*. A wooden cross-staff features in at least eight constcamer paintings [e.g. Cat. No. 17].

#### Mercator

Frisius had numerous famous students. His pupil and then collaborator Gerard Mercator (1512-1594) is renowned for creating the 1569 world map that made use of a projection, nowadays known as the Mercator projection that remains in use today, especially for navigation.<sup>713</sup> In 1552, Charles V commissioned a small terrestrial sphere from Mercator, to be inserted into a transparent celestial sphere made of rock crystal.<sup>714</sup> These globes were intended to crown an astronomical clockwork made for Charles V by Janello Torriani (ca. 1500-1585).<sup>715</sup> Torriani made two clockworks, one called the *Microcosm* (1547-1550) and a

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<sup>712</sup> <http://www.mhs.ox.ac.uk/object/inv/53211> (accessed November 13, 2020); Apian, *Cosmographicus Liber*, fol. 63; Lerijs and Rombouts, *De Liggeren*, 1:145; Cosgrove, "Images of Renaissance Cosmography," 78; Mosley, "Sundials and Other Cosmographical Instruments," 67–68.

<sup>713</sup> Cosgrove, "Images of Renaissance Cosmography," 76 & 82.

<sup>714</sup> Zanetti, "The Microcosm," 42; Van Cleempoel, *A Catalogue Raisonné*, 11–14. By this time Mercator had moved to Duisburg to join William V, Duke of Jülich-Cleves-Berg.

<sup>715</sup> Zanetti, *Janello Torriani*, 292.

later one called the *Crystalline* (1554-1562), for which Mercator's globe was intended.<sup>716</sup> The cartographer also made celestial globes, and some of them can be found in constcamer paintings [e.g. Cat. No. 49].<sup>717</sup>

### Arsenius

Gualterus Arsenius (ca. 1530-ca. 1580) studied at the University of Leuven until 1546 and was probably an apprentice of Mercator.<sup>718</sup> Arsenius was active as an instrument maker in Leuven from 1554 onwards. Nowadays he and his workshop are best known for his astrolabes, and one of them is probably on display in the *Portrait of Gemma Frisius* [Fig. 48].<sup>719</sup> He signed some of his astrolabes not with his name, but as "*Nepos Gemmae Frisij*" or the descendant of Gemma Frisius.<sup>720</sup> An Arsenius astrolabe is preserved at the Museo Galileo in Florence [Fig. 183], which is similar in design to the astrolabe reproduced in the constcamer painting known as the *Linder Gallery* [Cat. No. 73].<sup>721</sup> Both have a magnetic compass on display at the throne, flanked by a male and female faun.

Except for the magnetic compass, the painted Arsenius astrolabe [Cat. No. 73] shows even more similarities with the so-called "Philip II" astrolabe [Figs. 247 and 248]. This instrument was produced in 1566 and is, incorrectly, associated with Philip II because of the inscription "*Philippo Rege*," added to the throne in the nineteenth century.<sup>722</sup> Charles V and

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<sup>716</sup> It has been suggested that the *Microcosm* [Fig. 225] and *Crystalline* appear, among alarm clocks from Philip II's collection, in the *Allegory of Hearing* [Cat. No. 134] (see chapter 11). Zanetti, "The Microcosm," 44. The corresponding objects are labeled as such in the constcamer dataset, courtesy of Zanetti.

<sup>717</sup> <https://sites.google.com/a/explore.thewalters.org/thechamberofwonders/the-archdukes-visitng-a-collector-s-cabinet> (accessed October 21, 2017).

<sup>718</sup> <https://catalogue.museogalileo.it/biography/GualterusArsenius.html> (accessed June 16, 2020); Van Cleempoel, *A Catalogue Raisonné*, 34–55.

<sup>719</sup> Van Cleempoel, 35.

<sup>720</sup> Van Cleempoel, 101 & passim; Gessner, "The Use of Printed Images," 129; Gessner, "The Perspective of the Instrument Maker," 105 & 115.

<sup>721</sup> Gorman and Marr, "Others See It Yet Otherwise," 87.

<sup>722</sup> Van Cleempoel, *A Catalogue Raisonné*, 137–38.

Philip II did, however, sponsor the scientific efforts undertaken at or in connection with the University of Leuven through commissions.<sup>723</sup> The painted *rete*, or the moveable spider placed on top of the *tympanum* (or plate) that is nested in the *mater* (or main disk), is represented in great detail in the *Linder Gallery*.<sup>724</sup> The four “heart-shapes” or spades inside the smaller circle of the ecliptic closely resemble those in brass, and this unusual motif is found in only one preserved Arsenius astrolabe, the “Philip II” astrolabe [Fig. 247].<sup>725</sup>

### Vesalius

Another one of Frisius’ pupils was Andreas Vesalius (1514-1564). Vesalius is best known for his book on human anatomy, *De Humani Corporis Fabrica Libri Septem*, published in Basel in 1543. Soon after the publication and dedication of this work to Charles V, Vesalius became imperial physician at the court of the Holy Roman Emperor. *De Humani Corporis Fabrica* revolutionized the study of human anatomy as it was long taught based on the writings of Galen [Fig. 23] but was not accepted immediately.<sup>726</sup>

Vesalius’ book is illustrated with numerous plates of parts of the human body as well as entire skeletons in artistic poses [Fig. 184]. The artist associated with these woodcuts is Jan Steven van Calcar (ca. 1499-ca. 1546), a former pupil of Titian.<sup>727</sup> Vesalius, just like his contemporaries Leonhard Fuchs and Georg Agricola (see chapter 5), valued images highly: “Illustrations greatly assist the understanding, for they place more clearly before the eyes what the text no matter how explicitly describes.”<sup>728</sup>

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<sup>723</sup> Van Cleempoel, 2.

<sup>724</sup> Bud and Warner, *Instruments of Science*, 33.

<sup>725</sup> Van Cleempoel, *A Catalogue Raisonné*, 29 & 50.

<sup>726</sup> Cosgrove, “Images of Renaissance Cosmography,” 60.

<sup>727</sup> Van Mander, *Het Schilder-Boeck*, part 4, fol. 218r; Janson, “Titian’s Laocoon Caricature,” 50.

<sup>728</sup> Quote by Vesalius taken from *De Humani Corporis Fabrica* as translated in Smith, “Art, Science, and Visual Culture,” 86–87; Kusakawa, “The Uses of Pictures,” 84–91; Margócsy, “From Vesalius,” 316–17.

## Dodoens

Rembert Dodoens (1517-1585) also was a student of Frisius at the University of Leuven. Dodoens specialized in yet another branch of medicine, that of botany. His fruitful career brought him in the service of Holy Roman Emperors Maximilian II and his successor Rudolf II. His last position was that of professor in medicine at the University of Leiden as of 1582. In line with other botanists such as Fuchs, Dodoens expanded on the plant world as initially described in Dioscorides' *De Materia Medica* [Fig. 23]. He is best known for his *Crujdt-boeck* of 1554, published in Antwerp, which deals with the classification of the plant kingdom into six groups. Carolus Clusius (1526-1609) translated this work in French and published his *Histoire des Plantes* (1557) also in Antwerp.<sup>729</sup>

## Sunflower

In 1568, Dodoens was the first to describe and depict a sunflower. The woodcut entitled "*Chrysanthemum Perunianum*" can be found in the epilogue to his *Florum et Coronariarum Odoratumque Nonnularum Herbarum Historia* (Antwerp: 1568, p. 295).<sup>730</sup> Dodoens is probably included as a visitor in the constcamer painting *Gallery Interior with Rembert Dodoens* [Cat. No. 155]. In addition, the sunflower can be found in one constcamer painting entitled *The Archdukes Visiting the Collection of Pierre Roose* [Cat. No. 49]. The sunflower was discovered on journeys to the New World and would gain special significance in the Christian religion (for Christ as a symbol of light, see chapter 13). Since the sunflower follows

<sup>729</sup> Egmond, Hoftijzer, and Visser, *Carolus Clusius*, 24, 92 & passim. Available online via <https://archive.org/details/hin-wel-all-00000414-001/page/n17/mode/2up> (accessed January 25, 2021).

<sup>730</sup> Brenninkmeijer-de Rooij and Ekkart, *Roots of Seventeenth-Century Flower Painting*, 52; Chen, "A Woodblock's Career," 24. The "*Chrysanthemum Perunianum*" woodcut is available online via [https://archive.org/details/BIUSante\\_pharma\\_res019124/page/n294/mode/2up](https://archive.org/details/BIUSante_pharma_res019124/page/n294/mode/2up) (accessed January 25, 2021).

the sun, symbolically it follows Christ [Fig. 186].<sup>731</sup> In the constcamer painting, however, it is turned towards the Archdukes.

Besides the metaphysical connotations of the sunflower, its physical appearance was known only to those with access to either a specimen or a truthful representation. The depiction of plants in general, and the sunflower [Fig. 186] in particular, formed a challenge for botanists and artists [Fig. 256]. Pliny was already aware of this challenge, when he described in his *Naturalis Historia* how the Greek authors attempted to delineate plants in colors.

In addition to these [Romans], there are some Greek writers who have treated of this subject, and who have been already mentioned on the appropriate occasions. Among them, Crateuas, Dionysius, and Metrodorus, adopted a very attractive method of description, though one which has done little more than prove the remarkable difficulties which attended it. It was their plan to delineate the various plants in colours, and then to add in writing a description of the properties which they possessed. Pictures, however, are very apt to mislead, and more particularly where such a number of tints is required, for the imitation of nature with any success; in addition to which, the diversity of copyists from the original paintings, and their comparative degrees of skill, add very considerably to the chances of losing the necessary degree of resemblance to the originals. And then, besides, it is not sufficient to delineate a plant as it appears at one period only, as it presents a different appearance at each of the four seasons of the year.<sup>732</sup>

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<sup>731</sup> The marigold is part of the sunflower family. See <http://vocab.getty.edu/page/aat/300435259> (accessed November 16, 2020).

<sup>732</sup> Pliny, *The Natural History*, 25.4. See also Chen-Morris, "From Emblems to Diagrams," 135; Carey, *Pliny's Catalogue of Culture*, 133.

Throughout the year plants undergo four major changes: first budding and foliation, then blossoming, subsequently fructification, and lastly the fall of the leaf.<sup>733</sup> Capturing the “universals” of a plant, rather than its “particulars,” was not an easy task. Plants are continuously in flux, in transformation. The challenge of depiction resonates with the practice, both in antiquity and in the early modern period, of giving pictorial form to Ovid’s *Metamorphoses* in particular (see chapter 12).

## Influential humanists in Antwerp

Antwerp became a scientific capital of its own, due in no small part to the abundance of artistic activity.<sup>734</sup> The Italian humanist Lodovico Guicciardini (1521-1589) in his *Descrittione [...] di tutti i Paesi Bassi* or *Description of All the Low Countries* (Antwerp: 1567) characterized Antwerp as the capital of global trade, where new goods and new information were exchanged on a large scale.<sup>735</sup> His fellow humanists from Spain called Antwerp a *plaza d’el mundo* or a marketplace of the world.<sup>736</sup> According to Guicciardini, certain urban groups were especially virtuous within the city of Antwerp, namely the merchants, artists and artisans. In 1588, the updated *Descrittione* also included the suppliers of geographical and mathematical knowledge.<sup>737</sup> These will be discussed in this section along with other learned men that influenced the humanist and philosophical cultures of Antwerp.

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<sup>733</sup> Pliny, *The Natural History*, 25.4 (note 1).

<sup>734</sup> Davids, “Cities, Long-Distance Corporations,” 128.

<sup>735</sup> Göttler, Ramakers, and Woodall, “Trading Values,” 26; Dupré, “The Value of Glass,” 139.

<sup>736</sup> Göttler, Ramakers, and Woodall, “Trading Values,” 15.

<sup>737</sup> Göttler, Ramakers, and Woodall, 16.

## Ortelius

Abraham Ortelius (1527-1598) was born in Antwerp, and after extensive travels entered the Antwerp Guild of Saint Luke in 1547.<sup>738</sup> In 1554, Ortelius met Mercator who greatly influenced Ortelius' career. In 1570, a year after Mercator's revolutionary projection appeared, Ortelius published his *Theatrum Orbis Terrarum* in Antwerp.<sup>739</sup> This is considered to be the first true modern atlas.<sup>740</sup> A portrait painting of *Abraham Ortelius* is included in *Cabinet of Art and Curiosities* (1620-1625) [Cat. No. 18]. Ortelius also is represented as a visitor in the constcamer painting *A Collector's Cabinet with Abraham Ortelius and Justus Lipsius* (1617-1625) [Cat. No. 123].<sup>741</sup> Both portraits reflect Rubens' *Abraham Ortelius* with a globe in his hands [Fig. 188], which is in turn based on an engraved portrait of Ortelius that was included in the 1579 edition of the *Theatrum* [Fig. 278].<sup>742</sup>

## Stevin

Another scholar who was active in Antwerp, albeit briefly, is Simon Stevin (ca. 1548-1620) from Bruges. Stevin moved to Leiden to study in 1581, and published *De Beghinselen der Weeghconst* in Antwerp in 1586, which has a highly interesting title page [Fig. 192].<sup>743</sup> In the

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<sup>738</sup> Lerijs and Rombouts, *De Liggeren*, 1:159.

<sup>739</sup> Cosgrove, "Images of Renaissance Cosmography," 70 & 76.

<sup>740</sup> Meskens, *Practical Mathematics*, 167; Van der Stock, *In Search of Utopia*, 122.

<sup>741</sup> Two records in RKD Explore refer to this same painting, namely <https://rkd.nl/nl/explore/images/62438>; <https://rkd.nl/explore/images/55277> (both accessed June 17, 2020). The date on the portrait painting in the right foreground, "1618" on the *Portrait of Father Johannes Neyen*, was mistakenly taken as the date of creation of the entire composition (see chapter 9).

<sup>742</sup> Another *Portrait of Abraham Ortelius* attributed to Adriaen Thomasz Key (ca. 1544-after 1589) was deaccessioned by the J. Paul Getty Museum, Malibu, in 2007. This calls into question the authenticity of the painting that was formerly thought to be the model for both Ortelius' engraved portrait [Fig. 278] and Rubens' painted version [Fig. 188]. For more details, see the auction report of 2015 via <https://www.invaluable.com/auction-lot/portrait-of-abraham-ortelius-235-c-94646f388c#> (accessed December 9, 2020).

<sup>743</sup> His publication was a volume containing three separate treatises, entitled *The Principles of the Art of Weighing* (discussed here), *The Practice of Weighing*, and *The Principles of the Weight of Water*. Van Dyck, "Motion and Proportion," 22; Koetsier, "Simon Stevin," 293–308.

cartouche we see Stevin's proof of the *clootkrans* (wreath of spheres) or the law of equilibrium on an inclined plane, which he used to reject the concept of perpetual motion (see chapter 11).<sup>744</sup> Above it we read "*wonder en is gheen wonder*" or "the miracle is no miracle." Stevin was a careful reader of Aristotle.<sup>745</sup>

Stevin was, just like his contemporaries, highly interested in language or "how to adjust words to things" in the vernacular (see chapter 3).<sup>746</sup> Thanks to Stevin the scientific vocabulary of the Dutch language was enriched by terms such as "*wisconst*" (the art of what is certain, nowadays *wiskunde*) for mathematics, and "*meetconst*" (the art of measuring [Figs. 180 and 181], nowadays *meetkunde*) for geometry.<sup>747</sup>

The inventory of Emmanuel Ximenez,<sup>748</sup> made in Antwerp in 1617, mentions that he had a book in his collection by Stevin entitled *Wisconstige Gedachtenisse* (Leiden: 1605-1608).<sup>749</sup> The *Wisconstige Gedachtenisse* comprised the lectures that Stevin had given to Maurice, Prince of Orange. Stevin had become the prince's personal mathematics teacher and advisor, and in 1593 was given a paid position as quartermaster in the army.<sup>750</sup> In this capacity he accompanied Maurice during his military campaigns.<sup>751</sup>

Part one of the *Wisconstige Gedachtenisse* deals with the so-called "*weereltschrift*," Stevin's Dutch term for *kosmographia* or cosmography [Fig. 193]. Stevin also introduced a Dutch term for *theoria*, in his *De Beghinselen der Weeghconst*, namely *spiegheling*. This term comes from *spiegel* or mirror, and a *spiegheling* can be understood as "both the image

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<sup>744</sup> Koetsier, "Simon Stevin and the Rise of Archimedean Mechanics," 98–99.

<sup>745</sup> Van Dyck, "Motion and Proportion," 33.

<sup>746</sup> Weststeijn, "From Hieroglyphs," 239 & 269.

<sup>747</sup> Andersen, *The Geometry of an Art*, 267.

<sup>748</sup> Dupré and Lüthy, *Silent Messengers*; Dupré, "The Value of Glass."

<sup>749</sup> Duverger, *Antwerpse Kunstinventarissen: 1*, 400 & 454.

<sup>750</sup> Andersen, *The Geometry of an Art*, 267.

<sup>751</sup> Jorink and Ramakers, *Art and Science*, 42.

reflected in a mirror, and the act of mirroring.”<sup>752</sup> *Spiegheling* can thus be translated as speculation, which Stevin describes as an imaginary operation without natural matter. Practice (*daet*, or *praxis* in ancient Greek), on the other hand, “is an operation which essentially takes place with natural matter.”<sup>753</sup> This is again in line with Aristotle, who conceived *theoria* as a contemplative activity (see chapters 4 and 7).<sup>754</sup>

Part three of the *Wisconstige Gedachtenisse* is entitled *Vande deursichtighe*. The Latin term *perspectiva* is translated as *deursichtighe* (literally: transparent) referring to perspective and optics. It includes the description of a perspective instrument called a “*glas*” or glass, which Stevin understood as the picture plane.<sup>755</sup> His instrument was certainly not the first of its kind. In order to correctly represent the three-dimensional world on a flat picture plane, the help of devices in the form of perspective aids was sought.

#### Perspective aids

In 1480, Leonardo da Vinci (1452-1519) drew a sketch [Fig. 53] of the practice of drawing an armillary sphere using a perspective aid. A piece of paper is placed on top of a piece of glass that allows the artist to trace the shapes perceived from a fixed point of view [see also Fig. 38].<sup>756</sup> Similar practices are illustrated in Albrecht Dürer’s *Underweysung der Messung* (Nuremberg: 1525) [Fig. 54].<sup>757</sup> The last two pages of the publication show woodcuts that evocatively explain the challenge of rendering persons and objects, such as the lute, in perspective. The instrument in the image on the right [Fig. 54] is similar to the perspective

<sup>752</sup> Van Dyck, “Motion and Proportion,” 23 (note 3).

<sup>753</sup> Van Dyck, 23.

<sup>754</sup> E.g. Horky, *Cosmos in the Ancient World*, 212.

<sup>755</sup> Jorink and Ramakers, *Art and Science*, 38–48; Andersen, *The Geometry of an Art*, 270; Struik, *The Principal Works*, II B:802.

<sup>756</sup> Kemp, *The Science of Art*, 170–71; Andersen, *The Geometry of an Art*, 81–113.

<sup>757</sup> Kemp, *The Science of Art*, 171–72; Andersen, *The Geometry of an Art*, 207–10; Berger, *The Art of Philosophy*, 179. *Messung* is the German translation of *perspectiva*, see Dupré, “How-To Optics,” 291–93.

instrument devised by Wenzel Jamnitzer [Fig. 55 and Cat. No. 73].<sup>758</sup> The setup in the image on the left [Fig. 54] is reminiscent of Stevin's *glas*.

### Coignet

Michiel Coignet I (1549-1623), son of Gillis Coignet the Elder, was an instrument maker active as cosmographer at the court of Archdukes Albert and Isabella, from 1596 until his death. Just like his father, Michiel was a member of the Antwerp Guild of Saint Luke.<sup>759</sup>

Coignet corresponded with Mercator, Fabrizio Mordente (1532-ca. 1608), whom he probably met in Antwerp around 1585, and Galileo Galilei (1564-1642), to whom we will return in chapter 13.<sup>760</sup> Coignet had a renowned library including foreign scientific literature.<sup>761</sup> Coignet excelled in trigonometry [Fig. 182], or the method of triangulation used in surveying, and not only made but also invented several instruments (see chapter 13).<sup>762</sup>

Around 1600 Coignet took up mapmaking and engaged with Ortelius' *Theatrum Orbis Terrarum*. He added thirteen maps, made by the descendants of Arsenius with whom he collaborated on several occasions, as well as an introduction on projections to some editions of Ortelius' atlas. The result was first published as *Epitome theatri orbis terrarum d'Ortelius* (Antwerp: 1601). The Latin edition of the *Epitome* was subsequently translated into French (Antwerp: 1602) and English (London: 1603). One of the new maps was that of the island of Japan together with a description derived from Jesuit sources.<sup>763</sup>

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<sup>758</sup> Hauschke, "The Mathematical Instruments," 3; Andersen, *The Geometry of an Art*, 224–28; Kemp, *The Science of Art*, 173.

<sup>759</sup> Lerijs and Rombouts, *De Liggeren*, 1:279; Meskens, *Practical Mathematics*, 14–21.

<sup>760</sup> Meskens, *Practical Mathematics*, 94, 126 & passim. Alexander Farnese was Mordente's patron.

<sup>761</sup> Meskens, 21 & 127–30.

<sup>762</sup> Meskens, 14.

<sup>763</sup> Meskens, 20 & 167–68.

## Lipsius

In *A Collector's Cabinet with Abraham Ortelius and Justus Lipsius* [Cat. No. 123], Ortelius is accompanied by Justus Lipsius (1547-1606). His portrait occurs again in yet another constcamer painting, *The Interior of a Collector's Cabinet with Justus Lipsius and Two Constliefhebbers* [Cat. No. 32] of around 1615. Lipsius studied at the University of Leuven, and taught at the University of Leiden and the *Collegium Trilingue* in Leuven. The foundation of the latter was supported by Erasmus, and three ancient languages were taught here: Hebrew, Greek, and Latin.<sup>764</sup> In the constcamers, Lipsius is copied almost identically after a work by Rubens known as *The Four Philosophers* [Fig. 189]. This painting shows us Rubens and his recently deceased elder brother Philip (both disciples of Lipsius) on the one side, and Jan van den Wouwer (also a pupil and friend of Lipsius) on the other side of Justus Lipsius.<sup>765</sup>

## Neostoicism

Above van den Wouwer a bust is placed [Fig. 189], which at the time was thought to represent Seneca. In 1598, Theodor Galle published his *Illustrium Imagines, ex Antiquis Marmoribus, Nomismatibus, et Gemmis Expressae* in Antwerp, which was based on a work by Fulvio Orsini (1529-1600).<sup>766</sup> In it he identified a marble bust, owned by Cardinal Alessandro Farnese, as a portrait of Seneca [Fig. 190].<sup>767</sup> Nowadays it is thought to represent either Hesiod or Aristophanes. Seneca, however, inspired the writings of Lipsius, who sought to revive Stoicism in a manner that was compatible with Christianity.<sup>768</sup> Lipsius' natural

<sup>764</sup> Bod, *A New History of the Humanities*, 153.

<sup>765</sup> Brusati, "Self-Portraiture and Self-Reflection," 168; Vlieghe, *Rubens*, 130–31.

<sup>766</sup> Haskell and Penny, *Taste and the Antique*, 52.

<sup>767</sup> Available online via <https://archive.org/details/illustriumimagin00gall/page/n276/mode/2up> (accessed June 18, 2020).

<sup>768</sup> Bass, "Justus Lipsius," 190.

philosophy is termed Neostoicism, and is based on the idea that “wisdom was acquired by studying the hidden structure of nature.”<sup>769</sup>

Lipsius’ approach was eclectic and also more inclusive than our modern understanding of ancient Stoicism (see chapter 4).<sup>770</sup> This was justified through the *Ad Lucilium Epistulae Morales* (ca. 65 AD), in which Seneca advised his readers to follow the example of bees: “Just as the bee imbibes from several of the most beautiful flowers in order to incorporate their nectar into its own honey.”<sup>771</sup> Seneca himself was gathering ideas from various sources in this letter, and explicitly references Virgil’s *Aeneid* (29-19 BC). The bee had been introduced about three centuries earlier as a metaphor for the poet in Plato’s *Ion* on the nature of poetic inspiration.<sup>772</sup> Since poetry was thought to be like painting, the ideal of creative selection is again reminiscent of Zeuxis’ Helen (see chapters 4 and 5).

#### Van Veen

Rubens’ teacher Otto van Veen (ca. 1556-1629) was a friend of Lipsius with Neostoic affinities. Van Veen was a *pictor doctus* or learned artist, just like many of the great artists of his time.<sup>773</sup> His mentors Dominicus Lampsonius (1532-1599) and Federico Zuccaro, for example, and his Antwerp predecessors such as Frans Floris I and successors such as Peter Paul Rubens. Lampsonius is well known for his *Pictorum Aliquot Celebrium Germaniae Inferioris Effigies* (Antwerp: 1572), and both he and Floris were Romanists (had traveled to

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<sup>769</sup> Esposito, “Ignis Artificiosus,” 246.

<sup>770</sup> Van Veen and Smeesters, *Physicae et Theologicae Conclusiones*, 25.

<sup>771</sup> Meganck, “Rubens on the Human Figure,” 66; Esposito, “Ignis Artificiosus,” 263 (note 93); Muller, “Rubens’s Theory,” 235; Seneca, *Ad Lucilium Epistulae Morales*, 2:276–79.

<sup>772</sup> Plat. *Ion*, 533e-534b. Available online via <http://data.perseus.org/citations/urn:cts:greekLit:tlg0059.tlg027.perseus-eng1:534b> (accessed June 7, 2021); Guest, *The Understanding of Ornament*, 88.

<sup>773</sup> de Vries, “Hondius Meets van Mander,” 287–89; Vignau-Wilberg, “Pictor Doctus,” 179–88.

Rome) just like their mentor Lambert Lombard (1505/6-1566) [Fig. 151].<sup>774</sup> From 1575 to 1580, van Veen was an apprentice in the Roman studio of Zuccaro, who formulated his theory of the divinely inspired artist-creator shortly thereafter (see chapter 5).<sup>775</sup> As a result, the artist was inducted into the Antwerp Guild of Romanists.

Traces of Zuccaro's ideas can be found in van Veen's *Physicae et Theologicae Conclusiones* [e.g. Fig. 196]. The divine nature of man, represented by the letter A [e.g. Fig. 191] surrounded by three D's (body, soul, and mind), is expressed throughout the book.<sup>776</sup> In addition, this eclectic work is influenced by Neostoicism, Paracelsism and alchemy.<sup>777</sup> Van Veen already made his admiration for Lipsius explicit in the address to the reader or spectator ("*Lectori seu Spectatori*") of his *Emblemata Horatiana* (Antwerp: 1607).<sup>778</sup> This emblem book contains texts by ancient Latin authors, mainly Horace, and is centered around Horace's notion of "*Ut pictura poesis*" (see chapter 4).

Alchemy was connected to the art of painting because of the pigments, paints and varnishes that were needed to create artworks.<sup>779</sup> Van Veen was furthermore temporarily employed by the noted Paracelsian Prince-Bishop Ernest of Bavaria (1554-1612), son of Albert V, Duke of Bavaria, who employed Quiccheberg and established the Munich *Kunstammer*.<sup>780</sup> Ernest had great interest in mathematics and the occult, and assembled a large collection of his own in his *Kunstammer*, *Schatzkammer*, and *Wunderkammer* in

<sup>774</sup> <https://rkd.nl/explore/artists/50682> (accessed November 18, 2020); Woodall and Porras, *Picturing the Netherlandish Canon*, 9–10 & passim.

<sup>775</sup> <https://rkd.nl/explore/artists/79637> (accessed November 18, 2020). Following Aristotle, Zuccaro argued that *disegno* forms the basis of human thought. See Berger, *The Art of Philosophy*, 182.

<sup>776</sup> Van Veen and Smeesters, *Physicae et Theologicae Conclusiones*, 43, 55 & passim. Body, soul, and mind make up the Aristotelian microcosm.

<sup>777</sup> Van Veen and Smeesters, 25–35.

<sup>778</sup> Available online via <https://archive.org/details/qhoratiflacciemb00veen/page/6/mode/2up> (accessed November 18, 2020).

<sup>779</sup> Van Veen and Smeesters, *Physicae et Theologicae Conclusiones*, 29.

<sup>780</sup> Van Veen and Smeesters, 30 & 32. Otto van Veen was later employed by Alexander Farnese and Archduke Ernest, Governors of the Spanish Habsburg Netherlands.

Liège.<sup>781</sup> He was a nephew of Rudolf II, whose inclinations towards alchemy and natural magic are well-known.<sup>782</sup>

Van Veen was in the service of Archdukes Albert and Isabella by the time he created the *Physicae et Theologicae Conclusiones* (ca. 1621).<sup>783</sup> Its introduction (“*Lectori & Spectatori*”) refers to the Academy of Plato, where according to the inscription above the entrance no one ignorant of geometry was allowed to enter. Van Veen’s interpretation (“no one incapable of representing his arguments by mathematical figures is admitted”) explains the visual language of his treatise.<sup>784</sup> He reinforced his theological principles with the physics and chemistry (“*Physicis & Chymicis*”) of Paracelsus. Furthermore, he included the Paracelsian trinities of Salt – Sulphur – Mercury, body – mind – soul, and substance – life – intelligence.<sup>785</sup> Paracelsus had formulated his philosophy of nature about a century earlier.

#### Paracelsus and alchemy

The local interest in Paracelsus already surfaced in the previous chapter, when the *Portrait of Paracelsus* by Rubens, after Metsys, was discussed [Cat. No. 9]. Paracelsus is also present as a visitor in in two constcamer paintings, namely the *Collection of Cornelis van der Geest with Paracelsus* [Cat. No. 15] and *Alexander the Great Visiting the Studio of Apelles* [Cat. No. 34], both created by van Haecht II. Paracelsus (1493/4-1541) studied medicine and was an alchemist within the current of chemical philosophy, popular in the Duchy of Brabant at the beginning of the seventeenth century.<sup>786</sup> He initiated a form of medicinal chemistry also

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<sup>781</sup> Van Veen and Smeesters, 31.

<sup>782</sup> Fučíková, *Rudolf II and Prague*, 62, 215 & passim.

<sup>783</sup> Van Veen and Smeesters, *Physicae et Theologicae Conclusiones*, 26 (note 151).

<sup>784</sup> See “*neminem admitti solitum perhibent, nisi qui sua figuris mathematicis designare ac deponere sciret argumenta*” in van Veen and Smeesters, 55.

<sup>785</sup> Van Veen and Smeesters, 32 & 55. Note that the alchemist Khunrath used the mystical-theological, mytho-hermetic, or Christian-Aristotelian trinity of Father – Spirit – Son, or God – Nature – Man. See chapter 9.

<sup>786</sup> Van Veen and Smeesters, 27–28.

known as iatrochemistry, while maintaining the traditional conception of the world as the triad of God, the macrocosm and the microcosm [e.g. Fig. 251].<sup>787</sup>

Paracelsus assigned a special role to artists, because they render the invisible visible.<sup>788</sup> Since humans were created in God's image, similar creative powers were attributed to them (see chapter 5). In line with the Peripatetics and Jesuits, Paracelsus emphasized that sensory experience leads to knowledge of nature and ultimately wisdom (see chapters 4 and 7).<sup>789</sup> According to his doctrine of *signatura rerum*, Nature's Maker (i.e. God) hid Signs in Nature that artists might be able to discern. Neostoicism, as we have seen, was similarly concerned with unraveling the hidden structure of nature. For Paracelsus, this involved the reading of the signatures or signs of natural things.<sup>790</sup>

In Paracelsian alchemy, the imitation of nature and realistic representing of nature comes closest to a true and unmediated knowledge of nature. The *signator perfectus* or perfect artist, in imitation of the divine Artist, is able to create perfect images animated by divine Signs.<sup>791</sup> The perception of signs is reserved for the skilled artist, who does not merely observe with the eyes (of the body). This type of physical seeing for Paracelsus is "like a peasant sees when he looks at a psalter. He sees only the letters, and cannot say anything more about it."<sup>792</sup> The science of signs or chiromancy (the reading of signs) required metaphysical vision and came to be at the heart of artisanal practice, since the science of signs made the invisible visible. Imitative painting was proposed as a new universal

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<sup>787</sup> Van Veen and Smeesters, 28; Rijks, "Catalysts of Knowledge," 206 & 233; Smith, *The Body of the Artisan*, 83–84. See also Galen above.

<sup>788</sup> Smith, *The Body of the Artisan*, 84–85.

<sup>789</sup> Smith, 87.

<sup>790</sup> Think of Zuccaro's understanding of *disegno* (see chapter 5). Smith, 86–87; Meganck, "Rubens on the Human Figure," 57.

<sup>791</sup> Smith, *The Body of the Artisan*, 86–87.

<sup>792</sup> Smith, *The Body of the Artisan*, 87.

language, reminiscent of Leonardo's view that paintings offer an (unmediated) access to nature that words cannot give (see chapter 3).<sup>793</sup>

### Summary: learned art and artful science

In the Duchy of Brabant, the arts and sciences were so closely related that we can speak of learned art and artful science. The university city of Leuven and Antwerp, with its trade networks, were incubators of theoretical and technical knowledge in the sixteenth and early seventeenth centuries. The common ground of the arts and sciences was their investment in the study of the nature of things. To this end tools were devised in the form of texts, images, and scientific instruments. The latter could be used, among other things, to support image-making processes, to be able to look at nature in a different (e.g. quantifiable) way, and to reflect natural phenomena in a systematic way to make them understandable.

The scientists schooled in Aristotelian (meta)physics pursued branches of knowledge that we now consider distinct, but which were closely related at the time. These branches related to the divine, the world and humankind. Those with artistic backgrounds also engaged in these branches of knowledge, since humanist education, based on the classical ideal of the *enkyklios paideia*, aimed at combining theory and practice, or *spiegheling* and *daet*. Influential intellectual currents in the region were all grounded to a greater or lesser extent in Aristotelianism and Christianity, including Neostoicism and alchemy. The art of painting, rooted in the science of signs, was elevated by its practitioners and Paracelsus as the educator of all virtuous arts and sciences.

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<sup>793</sup> Smith, 92.

# Part III:

## Constcamer paintings

## 9 Painted constcamers

Constcamer paintings emerged in the early seventeenth century. The Dutch term constcamer initially referred to a material collection, such as the *Kunstkammer* of Rudolf II, as can be found in van Mander's *Het Schilder-Boeck* of 1604 (see chapter 1). To my knowledge, this is the earliest use of the term, which denoted a room dedicated to the arts (see chapter 6). In van Mander's view, these arts included the *Natuerlijcke* and *vry Consten*, or the natural and liberal arts.<sup>794</sup> The same view seems to apply in the Spanish Habsburg Netherlands, from which van Mander originated. In 1627, the term constcamer was first used in an Antwerp inventory to designate a painting.<sup>795</sup> The painterly genre referred to by this term represents "*consten*" in its broadest meaning, including the seven liberal arts.

This chapter focuses on what a constcamer painting is in a formal sense. First some final examples will be discussed that seem to have directly influenced the emergence of the constcamer genre. Then the definition will be proposed that was used to assemble the constcamer catalogue [Appendix A]. Inventories that explicitly mention constcamers are examined to arrive at a better understanding of the contemporary use of the term. Next, a number of edge cases will be studied in order to make the choices made in compiling the catalogue transparent. The final section of this chapter outlines the process of making a constcamer painting using an analogy to the better-known genre of flower pieces as well as a single case study in the form of *Apelles Painting Campaspe* [Cat. No. 8].

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<sup>794</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4v.

<sup>795</sup> Van der Veen, "Vorstellijcke en Burgerlijcke Verzamelingen," 133.

## Emergence of the genre

The constcamer genre emerged around the turn of the seventeenth century, and was fully established by the time the *Five Senses* series [Cat. Nos. 17, 134 to 136, and Fig. 66] was created by Jan Brueghel I and Peter Paul Rubens, work on which started in 1617 [Fig. 226].<sup>796</sup> Some scholars have suggested that the first dated example of a constcamer painting is Frans Francken II's *A Picture Gallery with a Man of Science Making Measurements on a Globe* of 1612 [Cat. No. 25], while others attribute this honor to Abel Grimmer's *Interior* of 1608 [Cat. No. 138].<sup>797</sup> The two of them collaborated with certainty on the constcamer painting *Jesus in the House of Martha and Mary* [Cat. No. 139] dating from 1614.<sup>798</sup> Several authors have identified a clear influence of the perspective drawings of Hans Vredeman de Vries (1527-ca. 1607) in this 1614 constcamer painting, the composition of which closely resembles that of Grimmer's earlier *Interior* [Cat. No. 138].<sup>799</sup>

### Linear perspective

Leon Battista Alberti (1404-1472) was the first to publish a scientific study of perspective in his *De Pictura* of 1435.<sup>800</sup> The invention of linear perspective "brought forth new, functional rules of geometry in its ways of seeing," and in turn such "encoding systems framed new understandings of phenomena."<sup>801</sup> The term perspective is derived from the Latin

<sup>796</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 112–53. The *Allegory of Smell* is not included as a constcamer in the constcamer catalogue. The *Allegory of Sight* is signed and dated "Brueghel.F.1617."

<sup>797</sup> "DIFRANCIS FRANCK FIN ET FECIT Ao 1612" via <https://rkd.nl/nl/explore/images/52549> (accessed March 3, 2020). See also Härting, "'Doctrina et Pietas,'" 98. The *Interior* is signed and dated "Abel Grimmer fecit 1608," see Speth-Holterhoff, *Les Peintres Flamands*, 50.

<sup>798</sup> Peeters, "Marked for the Market," 70–71.

<sup>799</sup> De Wilde and Roberts-Jones, *Le Musée Caché*, 46–49.

<sup>800</sup> The Italian edition *Della Pittura* appeared 1436. Alberti's text codified the experiments carried out by Filippo Brunelleschi (1377-1446) around 1413. See Kemp, *The Science of Art*, 9–52 & 344–45; Andersen, *The Geometry of an Art*, 14–34.

<sup>801</sup> Hobart, *The Great Rift*, 91–92.

*perspicere*, a combination of *per* (through) and *specere* (to observe). *Perspectiva* (clearly perceived) was used by Boethius (ca. 477-524) to translate the ancient Greek *optike* (relating to the eye or vision). This concept was furthermore linked to *scenographia* or scenography in the early modern period.<sup>802</sup> *Scenographia* and *perspectiva artificialis* or the geometrical art of two-dimensional representation was distinguished from *perspectiva naturalis* or optics.<sup>803</sup>

The use of geometry for the construction of linear perspective did not immediately influence artists in Antwerp, but Vredeman de Vries' treatises definitely helped to turn this around. He introduced the genre of architectural painting to Flemish art, for example with his *Christ in the House of Martha and Mary* [Fig. 52] created in Antwerp in 1566.<sup>804</sup> Predating this painting is his publication *Scenographiae, sive Perspectivae* (Antwerp: 1560), which includes an etching of an interior [Fig. 168] in correct perspective, decorated with paintings and sculptures, and furnished with cupboard, table and fireplace. Vredeman de Vries' *Perspective* (Leiden: 1604) is a second series of architectural perspectives, offering instructions for the construction of spaces in linear perspective on a two-dimensional surface [Fig. 51].<sup>805</sup>

Some of the iconographical types that preceded the constcamer genre have already been traced, such as the portrait of a scholar in his study and early pictorial catalogues (see chapter 6). Theoretical bases for early modern collecting practices could furthermore be found in classical notions of memory and recollection (see chapter 4). Quiccheberg's treatise

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<sup>802</sup> Andersen, *The Geometry of an Art*, xx.

<sup>803</sup> See "Roots in the 15th Century: The Expanded View" (Part 2), in: Beßler, "Chambers of Art and Wonders"; Andersen, *The Geometry of an Art*, xx. Stevin translated *perspectiva* as *deursichtighe* (see chapter 8), which he understood as including both *perspectiva artificialis* and *perspectiva naturalis*. *Scenographia* is translated as *verschaeuwing*, referring more specifically to linear perspective. See Andersen, 267.

<sup>804</sup> Vlieghe, *Flemish Art and Architecture*, 200; Beßler, "Chambers of Art and Wonders," n.p.; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 21. The latter also mentions collaborations between constcamer painters and Hans' brother Paul Vredeman de Vries [e.g. Fig. 277].

<sup>805</sup> Kemp, *The Science of Art*, 108–12; Andersen, *The Geometry of an Art*, 230–36.

conceptualized the *Kunstwunderkammer* as a theater of wisdom, and the *Inscriptiones* as a guide to acquire knowledge in all domains of human enquiry (see chapter 5).<sup>806</sup> As such the architectural mnemonic of the ancients was transformed from a mental capacity into a three-dimensional reality. In the *Amphitheatrum Sapientiae Aeternae* (Hamburg: 1595) of Heinrich Khunrath (1560-1605), this three-dimensional reality is in turn transformed into a two-dimensional representation [Fig. 50].<sup>807</sup> This process was accomplished by means of linear perspective.

#### Khunrath's *Amphitheatrum*

The *magnum opus* of the alchemist Khunrath contains four circular engravings he called *figuris quatuor Theosophicis* or theosophical images.<sup>808</sup> The fourth engraving shows an image surrounded by text, just like the other three, but this time the illustration offers a perspectival view into a cabinet of curiosities [Fig. 50]. The engraving was made by Paulus van der Doort, an Antwerp artist who moved to Hamburg where he met both Khunrath and Vredeman de Vries, who had formerly been active in Antwerp himself.<sup>809</sup> As the inscription "*H. F. Vriese pinxit*" indicates [Fig. 50], the engraving is based on a painting by Vredeman de Vries.<sup>810</sup> His mastery of perspective enabled him to create a convincing three-dimensional illusion of space on a two-dimensional surface.

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<sup>806</sup> Kuwakino, "The Great Theatre of Creative Thought," 307; Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*, 6.

<sup>807</sup> Lugli, *Naturalia et Mirabilia*, 58. According to Lugli, the *studiolo* housed the *oratorio-laboratorio* concept.

<sup>808</sup> The title page is available online via <http://digital.library.wisc.edu/1711.dl/UWSpecColl.DuveenD0897> (accessed November 30, 2020); de Bruijn, "From Text to Theatre," 349–51.

<sup>809</sup> Hans Vredeman de Vries registered as a citizen of Antwerp in 1548 and resided there intermittently between 1548 and 1586. See <https://rkd.nl/explore/artists/82012> (accessed November 27, 2020).

<sup>810</sup> de Bruijn, "From Text to Theatre," 351; Forshaw, "Alchemy in the Amphitheatre," 197.

Khunrath's fourth theosophical image [Fig. 50] is nowadays known as the *Lab-Oratorium* or the *Laboratory of the Alchemist*.<sup>811</sup> Khunrath was a disciple of Paracelsus and similarly maintained the trinity (*triunius*) of God, the macrocosm, and the microcosm. In the *Laboratory of the Alchemist*, we see an *oratorium* or a place for prayer, on the left. One of the opened books on the table is Khunrath's *Amphitheatrum*, which shows the first and second theosophical images. On the right we see an (al)chemical *laboratorium* that rests on the pillars of ratio and experience (see also Bacon in chapter 5).<sup>812</sup> One of the bottles on the mantelpiece is labeled *Hyle*, referring to Aristotelian matter [Fig. 251]. The middle of the image [Fig. 50] is devoted to a display of musical instruments marked with *musica sancta*, alluding to the harmony of the spheres and spiritual well-being (see chapter 11). In the background the space opens up to other rooms.<sup>813</sup>

Khunrath's *Laboratory of the Alchemist* predates printed images of collections by four years. The illustration of Imperato's *museo* appeared only in 1599, and is focused on objects of natural history. Even though van der Doort's engraving [Fig. 50] does not focus on reproducing works of art, it already contains many of the elements that would become characteristic of constcamer paintings. These elements include the beamed ceiling, the tables on which multiple objects are displayed, such as books, prints, and musical instruments, and the architectural vistas. As recent research has demonstrated, alchemy was of high significance to early modern Netherlandish art (see also chapters 8 and 13).<sup>814</sup>

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<sup>811</sup> <https://rkd.nl/explore/images/265924> (accessed November 27, 2020); Forshaw, "Oratorium – Auditorium – Laboratorium," 171.

<sup>812</sup> I count seven columns or pillars in Figure 50, which I believe could serve as a reference to Solomon's House of Wisdom.

<sup>813</sup> Forshaw, "Oratorium – Auditorium – Laboratorium," 172–73; Forshaw, "Alchemy in the Amphitheatre," 201.

<sup>814</sup> Marr, "Ingenuity and Discernment," 131.

## Pictorial precursors

### Interior architecture

Since Vredeman de Vries painted the image that was at the basis of the print by van der Doort [Fig. 50], this pictorial precursor can be placed in the strand of architectural imagery that led to the emergence of the *constcamer* genre.<sup>815</sup> In these paintings the architecture of patrician houses and rooms receives great attention and is rendered in detailed perspective. Important contributors to architectural painting are for example Abel Grimmer (ca. 1570-1618/9) [Cat. No. 138] and Louis de Caullery (ca. 1580-ca. 1621). De Caullery's *A Ballroom in Renaissance Style* [Fig. 56] closely resembles Vredeman de Vries' *Interior with Buffet, Chimney, and Religious Paintings* [Fig. 168] of 1560. Above the doorway in both Figures the statues of Bacchus, Venus (with Cupid) and Ceres can be seen, a motive we will return to in chapter 13.

The other strand of imagery culminating in the *constcamer* genre is that of the elegant company. Such images also present us with an interior scene, but perspective of the shallow room seems to be of less concern to the artist. The focus is instead on the figures within the space. The Francken family can be identified as working in this manner [Cat. No. 25], with the elder Frans I (1542-1616), head of the family, as a prominent contributor. In his *The Wedding is Going to Dance* [Fig. 57] a large crowd is getting ready to dance on the right side, and a group of musicians can be seen on the left. Against the rear wall metalware and glassware is displayed on a tiered buffet, while a painting of *Lot and his Daughters with the Burning Cities of Sodom and Gomorrah* is placed on top of a cabinet. In the middle an angry mob with torches is about to enter the room (see chapter 10).

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<sup>815</sup> Vlieghe, *Flemish Art and Architecture*, 200–202.

Notable in such precursors of the constcamer genre is the presence of interior decoration, especially the inclusion of paintings on the wall. The two strands of imagery are closely intertwined: the two artists associated with the first dated constcamer paintings, Abel Grimmer and Frans Francken II, collaborated on the constcamer of 1614 [Cat. No. 139].<sup>816</sup> Another, unsigned and undated, contender for being one of the earliest constcamer painting is *The Five Senses* [Cat. No. 131]. Perspective is again not a major concern to the unknown artist – perhaps Louis de Caullery (his studio or entourage) or (in the manner of) Frans Francken II – who included a telescope in the foreground of the painting. This constcamer can therefore be linked to the period of around 1608 (see chapter 13).

#### Prague's art market

Another pictorial precursor can be found in a print by Aegidius Sadeler II, the *Interior View of Vladislav Hall at Prague Castle during the Annual Fair* of 1607 [Fig. 58]. As noted above, Karel van Mander wrote about a constcamer in relation to the collections of Rudolph II, and it was in the entourage of this emperor that Sadeler was active. Sadeler was born in Antwerp but left the city permanently in 1587, settling in Prague in 1597, where he would become court engraver to three successive emperors: Rudolf II, Matthias (1557-1619) and Ferdinand II.<sup>817</sup> He pictured the annual fair in Prague Castle with all kinds of wares on display, such as paintings, prints, vases, clockworks, fabrics, and books. Well-dressed figures wander around in the large hall with Gothic vault. The subscription refers to Pliny when describing the huge “atrium,” which could invoke his notions on luxury. The supposedly Greek letters include eyeglasses [Fig. 60], which perhaps invite us to study the scene in more detail.

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<sup>816</sup> I do not agree with Justus Müller Hofstede, who argued that there is no relationship between architectural paintings and the constcamer genre. See Müller Hofstede, “Non Saturatur Oculus Visu,” 254.

<sup>817</sup> <https://rkd.nl/explore/artists/69217> (accessed December 4, 2020).

This print [Fig. 58] inspired multiple paintings, and one of them is attributed to Bartholomeus van Bassen (1590-1652) [Fig. 59]. The print and the painting both have similar dimensions. Interestingly, the artist freely interpreted the print and modified some details significantly. The ceiling is painted much lower, for example, and while some figures are copied one-on-one, their arrangement is shuffled. Look for example at the dog in the foreground on the left [Fig. 59]. This animal is absent in the print [Fig. 58], where we do see a dog but this time on a leash in the foreground on the right.<sup>818</sup> The beginning of the seventeenth century thus brought about a number of images that heralded the emergence of the constcamer genre.

## Defining constcamer paintings

“FOR DEFINITION IS OF THE UNIVERSAL AND OF THE FORM. IF THEN IT IS NOT EVIDENT WHICH OF THE PARTS ARE OF THE NATURE OF MATTER AND WHICH NOT, NEITHER WILL THE FORMULA OF THE THING BE EVIDENT.”

– Aristotle, *Metaphysics*, 1036b.

There are no seventeenth-century documents defining what a constcamer painting is. As a result, the definition proposed here is naturally a product of the twenty-first century. The paintings identified in this study as constcamers do have certain features in common, and were described as constcamer paintings from at least 1627 onwards. The proposed

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<sup>818</sup> The painted dog is significant to me because its pose looks similar to the monkey in *The Five Senses* [Cat. No. 131]. I have searched in vain for a comparable depiction of a monkey [e.g. Appendix D.9], but so far this dog most closely resembles the ape. This might tell us something about the sources or creators of both works, as well as the dating of *The Five Senses*.

definition corresponds to the ideal example, so each individual constcamer painting does not necessarily meet this definition one hundred percent. Four constituent parts can be distinguished, which relate to place and time of creation, the composition of the painting, the pictured elements, and the allegorical qualities of the idealized ensemble.

#### Proposed definition

First of all, paintings that are considered to be constcamers are associated with a specific geographical area and a specific era. The main center where constcamer paintings were produced is the city of Antwerp. In the course of the century Brussels became a second center, mainly due to the relocation of artists from Antwerp. Artists who worked in Antwerp or otherwise had a connection with this city and with each other thus make up the lion's share. The genre emerged at the beginning of the seventeenth century, with Grimmer's *Interior* (1608) [Cat. No. 138] as the first dated example. This dating corresponds roughly to the signing of the treaty of the Twelve Years' Truce in Antwerp on 9 April 1609. The timeframe extends to the end of the seventeenth century, with the collectively created *Palace Interior with Personifications of the Arts* (ca. 1660 and 1698) [Cat. No. 48] and *Interior with Figures in a Picture Gallery* (1667 and 1706) [Cat. No. 12] as the last dated examples. This end point coincides approximately with the death of Charles II of Spain in 1700, which initiated the War of the Spanish Succession that led to the end of Spanish reign over the Habsburg territory.

Secondly, the composition of constcamer paintings is characterized by certain pictorial properties. An interior space, however modest or grand, at ground level is always depicted in landscape format, and usually equipped with three walls, floor and ceiling. One of the side walls often has windows, while the other has an opening offering a view into an

adjacent room or a space outside. Without exception, the rear wall is shown perpendicular to the frame, in other words in frontal view. This distinctive surface division of characteristic proportions alludes to the interiors of predominantly Antwerp houses, but often scaled up to gigantic dimensions. If persons are present in the interior, they are depicted full-length.

Thirdly, constcamer paintings always include one or more paintings of diverse genres. These paintings are shown hanging on the wall, or typically leaning against a chair. Other prominent objects are sculptures, such as statues and fragments from antiquity (or their plaster casts) as well as contemporary statuettes. The collectibles are usually exhibited on one or two tables, on top of cupboards or shelves, and scattered across the floor. Artifacts include musical, optical, and mathematical instruments. Natural specimens include flowers, branches of coral, and seashells. Persons, both divine and human, and animals, both local and exotic as well as dead and alive, are often represented in constcamer paintings, sometimes interacting with each other or with the collection. A key feature is the free handling of dimensions, especially with regard to the represented paintings. When they refer to paintings that are still known today, it can be noted that their dimensions do not necessarily match the surrounding space in general, or the surrounding paintings in particular. The changes in proportion ensure an even surface distribution, and thus a balanced composition.

Lastly, constcamer paintings invariably depict collections that have symbolic connotations in addition to naturalistic qualities. One of the indications of idealization is that a constcamer painting never reflects a complete reality that could be observed at a glance (remember the free handling of dimensions just mentioned). An allegorical theme sometimes serves to organize one or multiple pictures of collections. Prominent examples are the Allegory of Sight, or more generally the Allegory of the Five Senses, and the Allegory

of Painting. Other pretexts for depicting collections appear to be themes such as the studio of the artist, the collector in his or her cabinet, and that of the *winckel* or display window (see chapter 7) packed with items of interest to *liefhebbers* or art lovers. An exceptional type of constcamer is that of the collective or group painting, in which several artists participate by each adding their own miniature painting to the larger constcamer painting. More often than not, several themes intertwine that are not easily distinguished from each other.

Overall, constcamer paintings express a wealth of knowledge. Those examples that conform less to one of the four constituents should compensate for this by excelling in the others to still be considered part of the constcamer genre. Artworks created after 1700 in the manner of constcamer paintings are considered *neo-constcamers*, in that they are modelled on the genre but introduce innovative features to distinguish themselves from the originally seventeenth-century Antwerp phenomenon. To gain a better understanding of local contemporary approaches to constcamer paintings, we will now examine those inventories that mention them explicitly.

#### Constcamers in Duverger's volumes

Over the course of fifteen years, Duverger published the Antwerp art inventories of the seventeenth century (see chapter 7). His books are a useful resource documenting the art collections in the possession of Antwerp residents, and in it the term constcamer is mentioned several times.<sup>819</sup> The first mention dates from an inventory of 1636, and the last mention occurs in 1697.<sup>820</sup> Eighteen constcamer paintings are mentioned, so about ten percent of the catalogue of constcamer paintings [Appendix A] collected based on the

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<sup>819</sup> It should be noted that the optical character recognition (OCR), which was used to retrieve the entries of constcamers, is not infallible, so some mentions from the fourth volume onwards may have gone unnoticed.

<sup>820</sup> Duverger, *Antwerpse Kunstinventarissen: 4*, 38; Duverger, *Antwerpse Kunstinventarissen: 12*, 423.

proposed definition. The inventories include short descriptions, which sometimes makes it possible to link a specific constcamer painting to a specific listing. In general, it is striking that constcamer paintings did not necessarily leave Antwerp, as they were also appreciated by local collectors from various backgrounds.

The first entry can be found in volume 4 and includes a constcamer painting in the inventory of the knight Jan de Romrée from 1636. It is described as “*Een schilderye wesende een Constcamer in gestoffeerde lyste op paneel olievertve.*”<sup>821</sup> As such the entry specifies an unidentified painting of a constcamer, painted on a wooden panel with oil paint, with an upholstered frame.

The following year (1637), Willem van Haecht II died and the inventory of the goods he left behind indicates that the painter owned two constcamer paintings at the time. Van Haecht bequeathed “*de grootste Constcamere by den testateur geschildert*” or the biggest constcamer painted by himself to Cornelis van der Geest (1575-1638). As we have seen in chapter 7, van Haecht was the curator of van der Geest’s collection. The painting with black wooden frame (“*swerte binnen houte lyste*”) possibly refers to *Apelles Painting Campaspe* [Cat. No. 8] (104.9 by 148.7 cm), or alternatively to *The Picture Gallery of Cornelis van der Geest* [Cat. No. 9] (102.5 by 137.5 cm).<sup>822</sup> In addition, van Haecht had *Joseph and Potiphar’s Wife in a Kunstkamer* [Cat. No. 45] in his possession, as the second listing describes a *cleyne* or small constcamer painting with Joseph and Potiphar’s Wife.<sup>823</sup> Possibly a third constcamer is mentioned that van Haecht sold to van der Geest even though it was in *Hollant* or the

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<sup>821</sup> Duverger, *Antwerpse Kunstinventarissen*: 4, 38.

<sup>822</sup> Duverger, 4:90, 91 & 112.

<sup>823</sup> Duverger, 4:90, 91 & 112.

Dutch Republic at the time.<sup>824</sup> This entry could refer to *Alexander the Great Visiting the Studio of Apelles* [Cat. No. 34], for reasons that will be explained in chapter 12.

An inventory from 1638 informs us that the baker Louis Stempels owned a constcamer painting with representations of “*syn Hoocheyt Albertus ende de Hertoghinne*” also known as the Archdukes. According to the catalogue of constcamer paintings [Appendix A], this entry could refer to one of the following examples: *The Picture Gallery of Cornelis van der Geest* [Cat. No. 9] (unlikely because of its association with Cornelis van der Geest), *The Archdukes Visiting the Collection of Pierre Roose* [Cat. No. 49] (unlikely because of its association with Pierre Roose), or *Archdukes Albert and Isabella Visit an Art Collection* [Cat. No. 121].<sup>825</sup> He also owned a second constcamer painting executed in oil paint and with a frame.<sup>826</sup>

Martinus Nutius III (1594-1638), merchant and book printer, also owned a constcamer painted on panel.<sup>827</sup> Subsequently Nicolaas Rockox (1560-1640) is mentioned as having a constcamer in his possession, perhaps referring to the *Supper at the House of Nicolaas Rockox, Mayor of Antwerp* [Cat. No. 33].<sup>828</sup> In volume 4, the term constcamer is also used to refer to an actual room in the house of David van Wils, in an inventory from 1642.<sup>829</sup>

In volume 6 we find the next mentions of constcamer paintings. Jan van Meurs (1583-1652), bookseller and *liefhebber*, owned a “*Constcamer van Vranck*,” presumably referring to Frans Francken II.<sup>830</sup> Another inventory of 1652 shows that Maria van Houte and her husband Jan Liebrechts also owned a constcamer painting.<sup>831</sup> A third constcamer is

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<sup>824</sup> Duverger, 4:112–13.

<sup>825</sup> Duverger, 4:172.

<sup>826</sup> Duverger, 4:172.

<sup>827</sup> Duverger, 4:196; Rijks, “Catalysts of Knowledge,” 275–77 & passim.

<sup>828</sup> Duverger, *Antwerpse Kunstinventarissen*: 4, 384.

<sup>829</sup> Duverger, 4:457.

<sup>830</sup> Duverger, *Antwerpse Kunstinventarissen*: 6, 268; Rijks, “Catalysts of Knowledge,” 268–69.

<sup>831</sup> Duverger, *Antwerpse Kunstinventarissen*: 6, 376.

mentioned in relation to Jeremias Wildens (1621-1653), son and apprentice of the painter Jan Wildens (1584/6-1653), which is said to be decorated with “*goude leir*” or gilt leather hangings (also known as Cuir de Cordoue), and again refers to a room rather than a painting.<sup>832</sup>

Volume 7 includes three more mentions of constcamers as a room, or perhaps a display cabinet (*kunstkast*): one in relation to Jacobus Edelheer, councilor and first pensionary of Antwerp, as well as member of the Council of Brabant (1654), and two in relation to Jean Moreault (1655), a maker of ebony cabinets.<sup>833</sup>

According to volume 8, Pedro van Mockenborch owned “*Een schilderye een Constcamer*” in 1664.<sup>834</sup> Volume 9 is more specific and mentions that Guillaume van Hamme, apostolic protonotary, priest, canon and scholastic of the Church of Our Lady, had a rolled up canvas representing a “*begonste constcamer*,” which perhaps was not yet in a finished state in 1668.<sup>835</sup> Anna Pivioen, widow of merchant Gillis Pauwens I, is said to have a “*schouwstuck*” in her possession (1670) that represents a constcamer, supposedly meant to adorn the mantelshelf.<sup>836</sup>

Volume 10 includes the 1678 inventory of Anna de Baillieur, sister of the painter Cornelis de Baellieur I, and owner of a constcamer created by him. This entry could refer to one of the following constcamer paintings created by de Baellieur I (1607-1671):

- *Interior of a Gallery of Pictures and Works of Art* [Cat. Nos. 1] (signed and dated),
- *Connoisseurs Visiting a Painter in his Studio* [Cat. No. 2] (signed),
- *A Picture Gallery* [Cat. No. 3] (signed),
- *Cabinet of Art and Curiosities* [Cat. No. 4] (unlikely because he only added the figures, and because of its association with Leopold Wilhelm [Fig. 82]),

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<sup>832</sup> Duverger, 6:495.

<sup>833</sup> Duverger, *Antwerpse Kunstinventarissen*: 7, 26 & 120.

<sup>834</sup> Duverger, *Antwerpse Kunstinventarissen*: 8, 397.

<sup>835</sup> Duverger, *Antwerpse Kunstinventarissen*: 9, 118.

<sup>836</sup> Duverger, 9:254.

- *The Studio of Rubens* [Cat. No. 5] (unlikely because of the sitters and because of the uncertain attribution to de Baellieur),
- *Gallery of Art Objects* [Cat. No. 6] (uncertain attribution to de Baellieur), and
- *Gallery of a Collector* [Cat. No. 7] (uncertain attribution but similar to Cat. Nos. 1 and 2).<sup>837</sup>

It is entirely possible, however, that de Baellieur I made more constcamer paintings than could be listed at present.

Interestingly, we find a mention of a constcamer painted by “*diversche meesters*” or several masters in the 1681 inventory of Catharina Rummener, widow of merchant Gillis van Diest I.<sup>838</sup> This mention refers to one of the constcamer paintings created collaboratively by two or more artists. Collaborations occurred frequently (see chapter 7) and the same applied to the constcamer genre. Think for example of the collaboration between Grimmer and Francken II [Cat. No. 139]. Constcamer paintings created by larger collectives are relatively rare, and the constcamer catalogue [Appendix A] contains only a few such paintings [Cat. Nos. 10, 11, 12, 16, 47 and 48].<sup>839</sup> The phenomenon goes back to a pair of constcamer paintings created for the Archdukes between 1615 and 1618, of which only the copies made around the same time [Cat. Nos. 16 and 137] have been preserved (see chapter 10). As a result, a common collaboration is probably meant here, rather than the more exclusive group painting.

In volume 11, another constcamer is specified as being painted on panel, in the possession of Machteld Elizabeth Cassaurij, the spouse of Nicolaus Goetkindt, in 1685.<sup>840</sup> A reference is furthermore made to a room known as a *constcamer* in the house of Joan van

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<sup>837</sup> Duverger, *Antwerpse Kunstinventarissen: 10*, 401.

<sup>838</sup> Duverger, *Antwerpse Kunstinventarissen: 11*, 104.

<sup>839</sup> There might be more examples, but in the absence of documentation this is hard to verify.

<sup>840</sup> Duverger, *Antwerpse Kunstinventarissen: 11*, 356.

Weerden, Lord of Blocqlant (or Blocklandt) in 1686.<sup>841</sup> The nobleman Ludovicus Gisens (or Giesen) was the owner of a painting representing his entire *constcamer* in 1688.<sup>842</sup> This is extremely interesting to note, since it means that several individuals had their own collections pictured, just as van Haecht II had previously done for van der Geest.

Two more collaborative *constcamer* paintings are mentioned in volume 12. Included in the 1691 inventory of Sebastiaan Leerse, guarantor of Brabant, is a large *constcamer* painting “*in swerte leyste met vergult randeken van differente meesters*” (in a black frame with a gilded rim by several masters).<sup>843</sup> Previously, Sebastiaan Leerse was identified with the sitter in *Portrait of a Family in an Art Gallery* (ca. 1628-1629) [Cat. No. 36], created by Frans Francken II, but this turned out to be incorrect.<sup>844</sup> Another “*schilderije Constcamere van differente meesters*” was in the possession of merchant Joan Jacomo Gelthoff in 1697.<sup>845</sup> The listing of these collaborative *constcamer* paintings confirms that they most likely concern common collaborations and not the exceptional type of the collective painting.

This overview illustrates the variety of social groups within the city of Antwerp that are documented as owners of *constcamer* paintings during the seventeenth century. Three painters are mentioned explicitly – Willem van Haecht II, Frans Francken II and Cornelis de Baellieur I – and the *constcamer* paintings created by them are model examples of the genre. However, it is not always that straightforward to assign paintings to the *constcamer* genre. The issues encountered will be elaborated upon in the next section.

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<sup>841</sup> Duverger, 11:398.

<sup>842</sup> Duverger, 11:500. “*Item is sijnen testateurs expressen wille dat het stuck schilderije representerende sijne Geheele Constcamer naer sijn overlijden sal gestelt worden in den refter oft wel in de groote gastecamer van de voors. paters tot eene memorie van hem testateur, sonder dat tselve stuck schilderije sal vermogen wech geschoncken, vervoert oft vercocht te worden.*”

<sup>843</sup> Duverger, *Antwerpse Kunstinventarissen*: 12, 146.

<sup>844</sup> Speth-Holterhoff, *Les Peintres Flamands*, 78–79; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 23.

<sup>845</sup> Duverger, *Antwerpse Kunstinventarissen*: 12, 423.

## Reflections on edge cases

After careful consideration, 161 constcamer paintings were selected to be part of the constcamer catalogue [Appendix A]. In this section, the rationale for the inclusion, but also exclusion, of certain paintings will be explained. Let us briefly recap what the proposed definition of a constcamer is, in order to be able to assess which paintings can be regarded as such in retrospect. Firstly, constcamer paintings are explicitly related to the Spanish Habsburg Netherlands and originate from the seventeenth century. Secondly, the paintings represent an interior space in either a *faux* (illusionary) or a one-point perspective. Thirdly, this room is equipped with at least one painting and one other type of object. And finally, allegorical connotations give meaning to the depicted assemblages.

Naturally, some of the preserved constcamer paintings known to us today follow this definition more closely than others. Some of the catalogue entries are undisputedly part of the genre, such as those created by Willem van Haecht II [Cat. No. 8, 9, 15, 34, 45, and 55], while others are more on the periphery. Several edge cases will be highlighted, and an argument will be made as to why these paintings were or were not included in the constcamer catalogue [Appendix A].

## Family portraits

Artists such as Gonzales Coques (ca. 1614-1684) and Gillis van Tilborgh II (ca. 1625-ca. 1678) not only created constcamers, but also family portraits. It can be difficult to draw the line between the two types of painting. Coques (active in Antwerp) was involved in the creation of several collective constcamer paintings [Cat. Nos. 10, 11 and 12]. His family portraits are distinguished by the prominence of people, rather than the artworks present in the room that play only a minor role. Coques' *The Young Scholar and his Wife* [Fig. 110] of 1640

beautifully illustrates this point. A richly decorated interior with gilt leather hangings on the walls is inhabited by a young couple and their dog. This living space is equipped with a harpsichord (decorated with a *Judgment of Midas*), chairs and a table on which only a few objects are placed (and thus no collection), such as globe, sandglass, statuette of a flayed man and books.

Van Tilborgh II (active in Brussels) was appointed in 1666 as “keeper of the painting collection of the court and castle of Tervuren, the residence of the governor of the Habsburg Netherlands.”<sup>846</sup> As such he succeeded David Teniers II (1610-1690) and must have been familiar with the constcamer genre, many examples of which were created by his predecessor. Some of van Tilborgh II’s own constcamer paintings [e.g. Cat. Nos. 63 and 64] closely resemble those by Teniers II [e.g. Cat. Nos. 69 and 153], who often based his compositions on the archducal collection of Leopold Wilhelm that was housed in the Palace of Coudenberg in Brussels.<sup>847</sup>

In van Tilborgh II’s undated *Family Portrait* [Fig. 111], the portrayed family attracts the most attention. A harpsichord functions here as a symbol for harmony, since the lid reads “*Concordia Res Parvae Crescunt, Discordia Maximae Dilabuntur.*”<sup>848</sup> By contrast, in three other works by his hand, which include groups of people, objects of art dominate the scene. As a result of this shift in focus, his *A Picture Gallery* [Cat. No. 44], *Portrait of a Family in a Kunstammer* [Cat. No. 91], and *Portrait of Twelve Gentlemen in an Interior with Paintings* [Cat. No. 122] are part of the constcamer catalogue [Appendix A], whereas the aforementioned *Family Portrait* is not.

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<sup>846</sup> <https://rkd.nl/explore/artists/77492> (accessed May 28, 2020).

<sup>847</sup> Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*, 72.

<sup>848</sup> “Concord will make small things flourish, discord will destroy great things.” As used in the *Bellum Iugurthinum* of Roman writer Sallust (86-ca. 35 BC). See Bass, “Florilegium,” 23.

Hieronymus Janssens (1624-1693) is another artist known for both his constcamer paintings [Cat. Nos. 93, 94, 147, and possibly also 92 and 124] and family portraits. His *Family Portrait* (1666) [Fig. 112] is of special interest, because of the depiction of a locally produced *kunstkast* or display cabinet [Appendix D.2] in the domestic interior. The cabinet is prominently placed against the rear wall [Fig. 112] and surrounded by framed images of devotion. By the end of the first quarter of the seventeenth century such display cabinets [e.g. Fig. 166] were exclusively produced in (and exported from) Antwerp, where this art form could arise as a result of the close cooperation between members of the Antwerp Guild of Saint Luke, and the organizational skills of art dealers (see chapter 7).<sup>849</sup> A variety of specializations was involved in the creation of display cabinets, such as carpenters, painters and mirror makers. The earliest dated constcamer painting that includes a representation of a *kunstkast* is from 1617 [Cat. No. 17].

Another feature that is indicative of the Antwerp origin of Janssens' *Family Portrait* [Fig. 112] is the *kamerlijst* or the architectural molding (or ledge) that frames the walls. This *kamerlijst* fulfills two functions. On the one hand, it supports the paintings placed on top of these moldings. On the other, it supports the wall hangings suspended underneath them. Archival sources refer to this interior element as "*caemer-lijsten om tappijten, schilderijen, goude leiren, oft andere stoffen aentehanghen*."<sup>850</sup> About half of the constcamer paintings included in the constcamer catalogue [Appendix A] depict such a *kamerlijst*, which could indicate that this was a common element in the interiors of wealthy Antwerp households. Despite this similarity to constcamer paintings, the *Family Portrait* is not representative of the genre.

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<sup>849</sup> Baadj, "Collaborative Craftsmanship," 271 & 280.

<sup>850</sup> Van Damme, "17de-Eeuwse Kamerlijsten," 6–7. English translation: "room-moldings for hanging tapestries, paintings, gilt leather hangings, or other fabrics."

### Self-portraits

In the seventeenth century, artists also sometimes portrayed themselves surrounded by paintings. An example within the constcamer catalogue is *The Artist in his Workshop* [Cat. No. 61] signed and dated by David Teniers II in 1635.<sup>851</sup> The artist sitting behind the easel is most likely a self-portrait, with a *Portrait of David Teniers I*, the artist's father, shown among the pictures above his head. Two examples not included in the constcamer catalogue are nevertheless worth mentioning. The first of those was created by an unknown painter from the northern Netherlands around 1625. This *Portrait of a Painter* [Fig. 211] has a unique composition in portrait format, rather than the landscape format customary for the constcamer genre. A second *Self-Portrait* [Fig. 212] was created by the Scotsman George Jamesone (1589/90-1644) around 1642. Both paintings deviate from the proposed definition primarily in that the artist is not depicted full-length.

### Johann Michael Bretschneider

The *Interior with a Painting Collection* [Fig. 274] was initially considered to be part of constcamer catalogue [Appendix A], until further investigation showed that his painting is probably neither made by an anonymous Antwerp artist nor dating from around 1620.<sup>852</sup> Instead, the artwork was in all likelihood created by the artist Johann Michael Bretschneider (1656-1729), who was not even born at that time.<sup>853</sup> The similarities with some of Bretschneider's other works are striking. The Bohemian Bretschneider was active in Prague

<sup>851</sup> "D.TENIER.F and 1635" is inscribed on on the *Still Life with Overturned Jug* (rear wall), according to <https://rkd.nl/explore/images/290244> (accessed December 10, 2020).

<sup>852</sup> <https://rkd.nl/explore/images/12141> (accessed May 28, 2020).

<sup>853</sup> Heinrich S.J. Becker thinks so too. See Becker, "Studien zur Ikonographie." The Getty's ULAN mistakenly states that Bretschneider died in 1727: <http://vocab.getty.edu/page/ulan/500032771> (accessed May 28, 2020).

(1697-1707) and later Vienna (1707-1729).<sup>854</sup> There is nevertheless an indirect connection between him and Antwerp. Between 1697 and 1707 Bretschneider apparently came in touch with the print by Aegidius Sadeler II of the Vladislav Hall at Prague Castle [Fig. 58] or one of its derivatives. He created a painting after this model [Fig. 61], just as Bartholomeus van Bassen, active in The Hague and perhaps Antwerp, had (probably) done several decades earlier [Fig. 59].<sup>855</sup>

Subsequently, Bretschneider painted various picture galleries in the eighteenth century. For this reason, and because of his Bohemian origins, these paintings fall outside the scope of the proposed definition and are regarded as *neo-constcamers*. Three of them are nowadays part of the collection of the Bayerische Staatsgemäldesammlungen and were created in 1702, and around 1715.<sup>856</sup> The *Picture Gallery* of 1702 [Fig. 62] is an excellent example of a *neo-constcamer*. The size of the interior has increased dramatically, and so have the dimensions of the canvas itself, which measures 195.1 by 342.4 centimeters. The focus on paintings, which cover every centimeter of the walls they adorn, is strongly reminiscent of the *Interior with a Painting Collection* [Fig. 274]. This also applies to the chairs and the doorways with draperies.

The *Interior with a Painting Collection* [Fig. 274] seems to predate the other known (and signed) works by Bretschneider. Its dimensions, for example, are less extravagant (105.5 by 147.5 cm). The vista through the Italianate door opening into the adjoining room emphasizes knowledge and scholarship by means of the globe and books assembled on a table. At the far end of this room we can even discern a *kunstkast* or display cabinet. Even more striking, though, is the print by Albrecht Dürer of *Saint Jerome in His Study* [Fig. 13],

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<sup>854</sup> <https://rkd.nl/explore/artists/12428> (accessed May 28, 2020).

<sup>855</sup> <https://rkd.nl/explore/artists/4912> (accessed May 28, 2020).

<sup>856</sup> <https://www.sammlung.pinakothek.de/de/artist/QPdxzMm4w5> (accessed December 4, 2020).

turned into a painting for the occasion. This illustrates the inventive practices of appropriation and transformation of well-known works of art.

Thomas and van den Bossche

*A Collector in his Cabinet* [Fig. 275] by Gerard Thomas (1663-1720) is another one of those edge cases with an uncertain date of creation. The painting's dating of between 1680 and 1720 is the active period of the artist, who lived and worked in Antwerp.<sup>857</sup> As such, Thomas must have been well aware of the constcamer genre, and in a sense transformed it by the end of the seventeenth century. He created numerous paintings in both landscape and portrait format that all seem to be derived from the constcamer concept, with a focus on workshops (rather than collections) of painters, sculptors and alchemists. Many of his interiors ended up on the free market and are currently kept in private collections rather than in museums. One of his followers was Balthasar van den Bossche (1681-1715), who painted in almost identical style [Fig. 63] and was active from 1697 to 1715.<sup>858</sup>

The works by both Thomas and van den Bossche approach the 1700 mark, and without dates and signatures on their paintings, it is hard to tell exactly when they were made and by whom. The quality of available images is rather low and access to the privately owned works is difficult to obtain. Moreover, because the two artists gave a new twist to the genre, their oeuvres are not included in the constcamer catalogue [Appendix A] and are regarded as *neo-constcamers*. It is worth noting, however, that the work of Thomas, and by extension that of van den Bossche, maintained the tradition of David Teniers II, who created numerous constcamer paintings as well as other types of painted interiors, including

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<sup>857</sup> <https://rkd.nl/explore/artists/77179> (accessed May 29, 2020).

<sup>858</sup> <https://rkd.nl/explore/artists/11162> (accessed May 29, 2020).

alchemist workshops.<sup>859</sup> Especially the dog in the foreground of *A Collector in his Cabinet* [Fig. 275] is reminiscent of Teniers' paintings that feature similar creatures [e.g. Cat. No. 41].

#### Not just paintings

*The Painting Collection of the Counts of Bronckhorst-Batenburg in Anholt* [Fig. 64] of around 1645 is also not part of the constcamer catalogue [Appendix A]. It does not meet the criteria of the proposed definition, since only paintings are reproduced in this artwork. Furthermore, it is known that the painting was created on the basis of a German collection kept at Schloss Wasserburg in Anholt. It does include some intriguing details such as the painting reproduced in the upper right corner. Here we clearly recognize a version of *Saint Jerome in his Study* [Fig. 17] as created by Pieter Coecke van Aelst I, roughly 100 years earlier. Both the gallery picture [Fig. 64] and some of the paintings by the Dutch and Flemish masters it displays are still part of the collection of Museum Wasserburg-Anholt.<sup>860</sup>

#### The neercamer

*The Neercamer of a Patrician House near the Antwerp Wharf with a Young Gentleman Receiving Visitors* of 1650 [Cat. No. 120] reminds us that constcamer paintings were not created in isolation. This constcamer painting depicts an interior similar to other paintings that are not considered to be part of the genre. One such precursor is *A Patrician Room* [Fig. 65] attributed to de Caullery, whom we have already encountered in relation to *A Ballroom in Renaissance Style* [Fig. 56], inspired by Vredeman de Vries' work on perspective. As with

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<sup>859</sup> <https://www.rct.uk/collection/search#/2/collection/406900/a-collector-in-his-cabinet> (accessed May 29, 2020).

<sup>860</sup> <https://www.codart.nl/our-events/codart-veertien/codart-veertien-study-trip/background-information/> (accessed December 4, 2020).

the family portraits, *A Patrician Room* [Fig. 65] focuses on the elegant company in a grand architectural space, rather than on a collection of some kind. A different focus is provided by *The Neercamer of a Patrician House* [Cat. No. 120] to which Coques contributed.

The *neercamer* was a room at street level in Antwerp houses.<sup>861</sup> The one richly decorated in the constcamer painting [Cat. No. 120] shows kinship with contemporary interiors. Characteristic are the beamed ceiling, elaborate *kamerlijst* and gilt leather hangings. Through the door opening the *Kranenhoofd* of the Antwerp Wharf is visible, to leave no doubt about the surroundings [Appendix D.13]. The *Kranenhoofd* on the Scheldt can also be found as a picture-within-picture in the constcamer painting *The Picture Gallery of Cornelis van der Geest* [Cat. No. 9]. A family is present in the Antwerp *neercamer* [Cat. No. 120], which is furthermore decorated with a number of paintings by local masters. The showpiece above the fireplace represents *Rinaldo and Armida* rendered freely after Anthony van Dyck.<sup>862</sup> The stucco element above the fireplace with *schouwstuk* seems typical of wealthy Antwerp households and recurs several times [Cat. Nos. 34, 62, 120, 142, 143].

#### Philips Vingboons

Philips Vingboons (1607/8-1678), also known as Philips Vinckboons II, signed and dated his *Interior with Men Inspecting a Painting* [Cat. No. 132] as “PVBoons fecit A[nn]o 1627.”<sup>863</sup> Even though Philips lived and worked in Amsterdam, he is connected to the Antwerp art scene through his father David Vinckboons I (1576-1631/3) and grandfather Philip Vinckeboons I (1545-1604).<sup>864</sup> Philip I enrolled in the Antwerp Guild of Saint Luke in 1580

<sup>861</sup> See the glossary of terms in Maclot, “The Status of Stone.”

<sup>862</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 104; Speth-Holterhoff, *Les Peintres Flamands*, 25 & 167.

<sup>863</sup> <https://rkd.nl/explore/images/262292>; <https://rkd.nl/explore/artists/81118> (both accessed December 7, 2020).

<sup>864</sup> <https://rkd.nl/explore/artists/81117>; <https://rkd.nl/explore/artists/134379> (both accessed May 29, 2020).

and remained a member until 1586. His son David I moved with him from Antwerp to Middelburg in 1586, and to Amsterdam in 1591. As a result, Philips (II) was born in Amsterdam, but his constcamer painting does reveal his family's Antwerp background.<sup>865</sup> Because Philips Vingboons was an architect as well as a painter, his constcamer painting is shown in correct perspective with a lot of attention for the interior architecture.

#### Michele Ragoglia

Michele Ragoglia (?-1686), an Italian painter active in Naples, created several images of interiors that resemble constcamer paintings but are not considered to fall under this category. One example is his *Interior of a Palace* [Fig. 74]. The most notable deviation from the genre is the perspective in which the interior is painted. The rear wall is not rendered in a frontal view, which is so characteristic of constcamer paintings. Geographically speaking, Ragoglia's works do not meet the proposed definition either. Nevertheless, the *Interior of a Palace* exhibits wonderful details such as the two ebony *kunstkasten* or display cabinets and the mirror image of one of the attendees in the room on the far right. His works are perhaps a testament to the exchanges with Naples at the time.<sup>866</sup>

#### Quality standards

In 1957, Speth-Holterhoff included *The Artist in His Studio* [Fig. 72] in her overview of constcamer paintings, noting that its style is naïve, and perhaps made by a hobbyist rather than a professional painter.<sup>867</sup> After careful consideration it was decided to exclude this

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<sup>865</sup> Van der Veen, "Vorstellijke en Burgerlijke Verzamelingen," 137.

<sup>866</sup> From about 1576 (the year of the Spanish Fury), numerous Netherlandish painters migrated to Naples, with whom Ragoglia may have been in contact. On the topic of such immigrant painters in Naples, see for example Osnabrugge, *The Neapolitan Lives*.

<sup>867</sup> Speth-Holterhoff, *Les Peintres Flamands*, 112–13.

painting from the constcamer catalogue [Appendix A], because of the limited amount of information available in relation to the work and, moreover, it does not meet the level of quality generally associated with constcamer paintings. Nevertheless, it is a piece worth mentioning because of the interest it sparked in the United States of America for this type of painting. As early as 1949, the Wadsworth Atheneum, owner of *The Artist in his Studio*, held an exhibition themed *Pictures within Pictures*.<sup>868</sup>

The *Allegory of Painting* [Fig. 75], currently part of the collection of the Hermitage Museum in Saint Petersburg, is another one of those examples that does not meet the quality standards of the seventeenth-century Antwerp art market. Just like the painting in the Wadsworth Atheneum collection, this panel does reflect the elements and contents that are typical of the constcamer genre [e.g. Cat. No. 38]. The execution, however, is again more reminiscent of a hobbyist than a professional painter, and therefore this painting is not included in the constcamer catalogue [Appendix A].

#### *Allegory of Smell*

Even though the *Allegory of Smell* [Fig. 66] is part of the *Five Senses* series, this painting is not part of the constcamer catalogue, while the other four allegories are [Cat. Nos. 17, 134, 135, 136]. The obvious reason for this is that the painting does not represent an interior space. Rather, the personification of smell is seated outside, in a garden or park, reminiscent of the Warande Park commissioned by the Archdukes, adjacent to the Palace of Coudenberg in Brussels. A triumphal arch type of structure is furthermore visible on the right, and a smaller built structure housing distillation equipment on the left. The absence of one or

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<sup>868</sup> Cunningham, *Pictures within Pictures*.

more paintings is another indication that in this case we cannot speak of a constcamer painting, despite it being part of a series.

#### Copies of the *Five Senses* series

The *Five Senses* series was well-known among contemporary artists and frequently copied. Many have survived, both on their own and as part of series, as can be deduced from auction catalogues.<sup>869</sup> Such examples were not catalogued for lack of information concerning artist(s), dating, dimensions, medium, and surface material. Only a few such allegories are included in the constcamer catalogue as representatives of the copies made after the highly influential originals. These have in common that they have a record in RKD Explore. The *Allegory of Feeling* [Cat. No. 144] is clearly a copy after the *Allegory of Touch* [Cat. No. 135].<sup>870</sup> The *Allegory of Sight* [Cat. No. 24] was made based on the 1617 *Allegory of Sight* [Cat. No. 17].<sup>871</sup> A second copy more closely resembles the original and is nowadays attributed to the studio of Jan Brueghel II [Cat. No. 54].<sup>872</sup> While these copies are interesting because of their variations in detail, they are clearly of inferior quality, created by less talented artists than Brueghel I and Rubens.

In addition to these copies that adhere quite closely to the original *Five Senses* series, there are other variants, also not included in the constcamer catalogue, reinterpret them more freely. One such example is the *Allegory of Hearing* [Fig. 84], presumably created by

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<sup>869</sup> See for example the seventeenth-century series, *Allegories of Sight, Touch, Taste and Smell* by the studio of Jan Brueghel II, auctioned by Sotheby's (London) on July 11, 2002, lot no. 115, via <http://www.sothebys.com/en/auctions/ecatalogue/2002/old-master-paintings-part-two-l02112/lot.115.html> (accessed May 29, 2020).

<sup>870</sup> <https://rkd.nl/explore/images/9241> (accessed May 29, 2020). For example, another variant (without RKD Explore record) is kept in the Bayerische Staatsgemäldesammlungen: <https://www.sammlung.pinakothek.de/en/artwork/7yxYmAwXym> (accessed June 4, 2020).

<sup>871</sup> <https://rkd.nl/explore/images/9242> (accessed December 7, 2020).

<sup>872</sup> <https://rkd.nl/explore/images/64873> (accessed December 7, 2020).

Jan van Kessel I. This composition only slightly resembles the *Allegory of Hearing* [Cat. No. 134]. Brueghel I's descendants Brueghel II (son) and van Kessel I (grandson) [Fig. 273] continued to invent new variations on his success formulas, as is furthermore attested by their signed constcamer paintings such as the *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84] and the *Kunstkammer with Venus at her Toilet* (1659) [Cat. No. 39].<sup>873</sup> These in turn became the models of copies themselves, as will be discussed in chapter 10.

#### Contemporary and later copies

The Slovak National Gallery in Bratislava is the owner of the *Kunstkammer* [Cat. No. 146] by Ferdinand van Apshoven II (1630-1694), formerly attributed to Hans Jordaens III (1595-1643). The work is similar to two other constcamer paintings, one of which is signed by Cornelis de Baellieur [Cat. No. 2] and the other by Hans Jordaens III [Cat. No. 4]. Ferdinand van Apshoven II is furthermore associated with a copy [Cat. No. 160] after a constcamer painting by his teacher David Teniers II [Cat. No. 61], just like his brother Thomas van Apshoven (1622-1664) [Cat. No. 80].<sup>874</sup> As a result, the van Apshoven brothers are not known for their originality when it comes to constcamer paintings.

The *Kunstkammer* [Cat. No. 146] is worth mentioning because of the unusual symmetrical distribution of paintings on the rear wall. The draperies equally allude to a late seventeenth century dating. Another possibility could be that the constcamer painting was created after the print *Interior with an Art Collection and Art Lovers* (1728-1733) [Fig. 82], based on the *Cabinet of Art and Curiosities* (ca. 1630) [Cat. No. 4], instead of an actual

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<sup>873</sup> <https://rkd.nl/explore/images/42695>; <https://rkd.nl/explore/images/29253> (both accessed December 8, 2020).

<sup>874</sup> From 1647 onwards, Jan van Kessel I was married to Maria van Apshoven (?-1678), perhaps the sister of Thomas and Ferdinand II. <https://rkd.nl/explore/artists/44093> (accessed December 8, 2020).

painting.<sup>875</sup> Without direct access, however, the dating of the *Kunstkammer* is impossible to verify. In this case, it was preferred to rely on the expertise of the curators of the Slovak National Gallery, who established a dating between 1660 and 1680.<sup>876</sup> At the same time, we do know of another occasion that a copy was made in the nineteenth century [compare Fig. 73 with Cat. No. 78].<sup>877</sup> Since there is so much uncertainty about the dating of constcamer paintings in general, it is important to keep in mind that copies were made both in the seventeenth century and after, and sometimes they are indistinguishable from each other.

#### One instead of two

Based on the available documentation on artworks, such as publications, auction catalogues and archive records, it is not always clear whether only unique works of art are referenced or also duplicates. Based on the website [janbrueghel.net](http://janbrueghel.net), which offers a complete catalogue of the works of Jan Brueghel I, it would be likely to assume that the *Allegory of the Art of Painting (Pictura) and the Art of Drawing (Disegno)* [Cat. No. 51] exists in two variants, one with and one without the two figures in the left foreground.<sup>878</sup> The provenance of the constcamer painting that includes the figures identified as Pictura and Disegno goes back to 1954.<sup>879</sup> The most recent documentation, accompanied by detailed color shots, shows that it was last auctioned in Munich in 2007.<sup>880</sup>

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<sup>875</sup> For example, the dimensions are greatly reduced in size: 86 by 120 cm [Cat. No. 4] as opposed to 40,5 by 55,5 cm [Cat. No. 146].

<sup>876</sup> [https://www.webumenia.sk/en/dielo/SVK:SNG.O\\_4609](https://www.webumenia.sk/en/dielo/SVK:SNG.O_4609) (accessed December 8, 2020).

<sup>877</sup> Auctioned by Lempertz (Cologne) on September 29, 2010, lot no. 76. See <https://www.lempertz.com/en/catalogues/lot/966-1/76-flemish-school-19th-century.html> (accessed December 8, 2020).

<sup>878</sup> See *Gallery Interior* and *Kunstkammer*, respectively. <http://www.janbrueghel.net/object/gallery-interior-allegory-of-the-art-of-painting-and-the-art-of-drawing>; <http://www.janbrueghel.net/object/kunstkammer-unkown> (both accessed June 2, 2020).

<sup>879</sup> <https://rkd.nl/explore/images/50352> (accessed December 8, 2020).

<sup>880</sup> Auctioned by Hampel (Munich) on December 8, 2007, lot no. 1814. See <http://www.alaintruong.com/archives/2008/02/01/7784664.html> (accessed December 8, 2020).

The image of the *Allegory of the Art of Painting (Pictura) and the Art of Drawing (Disegno)* without the two figures exists only in black and white. A close comparison between the two images reveals that they are in fact of one and the same painting.<sup>881</sup> The poorly executed figures are painted over the older layers in already faded paint [Fig. 241]. Their unnatural bodies and poses [Fig. 240] are only vaguely reminiscent of other personifications of Pictura and Disegno, as for example included in *The Interior of the Picture Gallery of Peter Linder in Milan with the Personifications of Pictura and Disegno* [Cat. No. 73].

The odd iconography of one of the figures added in a later century [Cat. No. 51] moreover does not seem to refer to Disegno at all. The crown with flames of the male figure [Fig. 241] has more in common with a personification of the Intellect. Instructions for this type of personification can be found in Ripa's *Iconologia*, with an illustration in the 1603 edition [Fig. 242].<sup>882</sup> The overpainter seems to have been aware of such seventeenth-century sources, and as a result the figures have received plenty of attention from art historians such as Winner as early as 1957.<sup>883</sup>

Confusion also arose with regard to *A Collector's Cabinet with Abraham Ortelius and Justus Lipsius* [Cat. No. 123], since there are two records referring to this one painting in RKD Explore.<sup>884</sup> Superimposing the images again revealed that both records represent a single constcamer painting that apparently quickly changed hands in 1999, and was last seen at The European Fine Arts Fair, Maastricht, in March 2000.<sup>885</sup>

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<sup>881</sup> An animated gif by me is available via <https://floorkoeleman.tumblr.com/image/171449225188> (accessed December 8, 2020).

<sup>882</sup> Ripa, *Iconologia*, 237–38.

<sup>883</sup> Winner, "Die Quellen der Pictura-Allegorien," 44 & passim.

<sup>884</sup> <https://rkd.nl/explore/images/62438> (as auctioned by Christie's in 1999); <https://rkd.nl/explore/images/55277> (both accessed December 8, 2020).

<sup>885</sup> An animated gif by me is available via <https://floorkoeleman.tumblr.com/image/173796371028>; <https://rkd.nl/explore/images/55277> (both accessed December 8, 2020). Christie's documentation lists the same provenance, see <https://www.christies.com/lotfinder/lot/frans-francken-ii-a-collectors-cabinet-with-1603320-details.aspx> (accessed December 9, 2020).

Interestingly the constcamer painting [Cat. No. 123] includes a portrait of Father Jan Neyen (1569/70-1612), placed prominently in the foreground. It is inscribed with a date “ANNO MDCXVII” or 1617, and his age “ÆTAT. XXXVII” or thirty-seven.<sup>886</sup> This portrait is a copy after the *Portrait of Father Jan Neyen* by Rubens [Fig. 279], which depicts the Father as he looked in 1607, when he was thirty-seven years old.<sup>887</sup> This is significant, because Rubens was in Italy at the time and would only return to Antwerp in late 1608.<sup>888</sup> He probably painted the *Portrait of Father Jan Neyen* about ten years later, in 1617, as an homage to Neyen who participated in the peace negotiations on behalf of the Archdukes in 1607 and 1608, which resulted in the Twelve Years’ Truce in 1609.<sup>889</sup> Jan Neyen also appears on the far right in *Pictura, Poesis and Musica in a Pronkkamer* [Cat. No. 35], dated 1636, holding a *Portrait of Quinten Metsys* in his hands.

More than one

By contrast, some images of constcamer paintings that seem to be indistinguishable at first glance actually do refer to several variants of the same scene. This is for example the case for *The Cabinet of the Admirer of Arts* [Cat. No. 100] nowadays in Kiev, *Two Art Lovers at a Meal in an Art Gallery* [Cat. No. 105], whose location is not known, and *The Cabinet of an Art Collector* [Cat. No. 117] currently in Mannheim.<sup>890</sup>

Speth-Holterhoff identified as much as five different versions of this composition: one in the collection of Louis Mahieu, Brussels (in 1957), and what she considers to be its

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<sup>886</sup> <https://www.christies.com/lotfinder/lot/frans-francken-ii-a-collectors-cabinet-with-1603320-details.aspx> (accessed December 9, 2020).

<sup>887</sup> <https://rkd.nl/explore/images/5526> (accessed December 9, 2020).

<sup>888</sup> <https://rkd.nl/en/explore/artists/68737> (accessed December 9, 2020).

<sup>889</sup> <https://rkd.nl/explore/images/5526> (accessed December 9, 2020).

<sup>890</sup> An animated gif by me is available via <https://floorkoeleman.tumblr.com/image/176956994333> (accessed December 9, 2020).

replicas kept in Mannheim, Kiev, and Paris, and a fifth one sold by Lepke in Berlin in 1904.<sup>891</sup> However, upon verification with RKD Explore, two of them appear to be actually one and the same – *Two Art Lovers at a Meal in an Art Gallery* [Cat. No. 105], still privately owned, was formerly in the Mahieu collection (until at least 1989), and before that it was auctioned by Lepke (in 1904).<sup>892</sup>

Lastly there is the Paris replica Speth-Holterhoff described as being in the Gargam collection. Unfortunately, it was not possible to trace this particular painting. As a result, there might be a fourth variant strongly resembling the above mentioned three constcamer paintings [Cat. Nos. 100, 105, 117] that is not included in the constcamer catalogue (see also chapter 3).<sup>893</sup>

The catalogue [Appendix A] furthermore includes two allegories of the five senses that closely resemble each other. These are the *Allegory of the Five Senses* [Cat. No. 50] and the eponymous *Allegory of the Five Senses* [Cat. No. 99]. In turn, these two constcamer paintings are probably derived from *The Five Senses* [Cat. No. 131], a highly interesting example of equal dimensions (see chapter 13). By superimposing the images of the two allegories [Cat. Nos. 50 and 99] and then carefully comparing them, it became clear that they are two different paintings.<sup>894</sup> The variation in details, or rather the loss of certain details, furthermore reveals that the painting auctioned by Hampel in 2013 [Cat. No. 50] was in all likelihood the model for the one auctioned by Piasa in 2008 [Cat. No. 99].<sup>895</sup>

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<sup>891</sup> Speth-Holterhoff, *Les Peintres Flamands*, 90-91 (Fig. 27) & 210 (note 109).

<sup>892</sup> <https://rkd.nl/explore/images/116562> (accessed December 9, 2020). Even though Speth-Holterhoff suggests the Lepke variant was painted on copper instead of panel, the most recent statement of provenance (auctioned at Piasa, Paris, in 2004) confirms that we are dealing here with a single painting.

<sup>893</sup> Speth-Holterhoff, *Les Peintres Flamands*, 210 (note 109).

<sup>894</sup> An animated gif by me is available via <https://floorkoeleman.tumblr.com/image/611557086381441024> (accessed December 9, 2020).

<sup>895</sup> Most notable is the top of the *kunstkast* on the right. This detail is visible in Cat. No. 50, but indefinable in Cat. No. 99.

### Francken family's workshop

The studio of the Francken family [Fig. 263] is known for its prolific creation of artworks, including constcamer paintings. About sixty-five paintings (ca. 40%) of the constcamer catalogue [Appendix A] have the name “Francken” associated with them.<sup>896</sup> Sometimes multiple variations on one theme exist, not all of which are considered to be part of the constcamer genre. This will be illustrated by means of two examples. The first concerns the theme of Croesus and Solon, the second that of Achilles discovered by Ulysses.

The moralizing story of Croesus and Solon was an appropriate theme for a constcamer painting, since it warns about the dangers of wealth as the basis of happiness. In *Croesus Showing his Treasures to Solon* [Cat. No. 141] the king of Lydia shows his opulence to the wise Solon, one of the Seven Sages of ancient Greece. The interior space strongly resembles certain element of the *Allegory of Sight* [Cat. No. 17], such as the shelves with busts and statuettes, and the adjoining vaulted gallery with paintings [see also Cat. No. 16]. Moreover, through the arched opening on the left [Cat. No. 141] the same vista of the Palace of Coudenberg can be seen [Appendix D.13]. Other variants, such as *The History of Croesus and Solon* [Fig. 113], have not been included in the constcamer catalogue.<sup>897</sup> The reason for this is that the represented scene only partially takes place in an interior space, and because references to Antwerp or Brussels are sparse.

Why the Ovidian story of Achilles among the daughters of Lycomedes fits the constcamer genre will be discussed extensively in chapter 12. This theme formed the basis

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<sup>896</sup> The respective family members are Frans Francken I, Frans Francken II, Frans Francken III, Hieronymus Francken II, Hieronymus Francken III, and Ambrosius Francken II. Their roles are characterized as creators and possible creators (see chapter 10).

<sup>897</sup> At least one other version can be found in a private collection. See <https://rkd.nl/explore/images/50273> (accessed June 8, 2020).

for at least six paintings, which can all be traced back to the Francken workshop. The main version seems to be *Achilles Discovered by Ulysses among the Daughters of Lycomedes* [Cat. No. 107], currently owned by the Louvre. An almost identical panel was auctioned by Sotheby's in 2007 [Cat. No. 30]. A third painting differs slightly in the details, but the overall setup remained the same [Cat. No. 125]. In all three constcamer paintings the same vista of the Palace of Coudenberg as represented in the *Allegory of Sight* [Cat. No. 17] can be seen through the arched opening on the left.

Other variants of Achilles and the daughters of Lycomedes [Figs. 91, 92 and 93] are smaller in size (about 55 by 75 cm) compared to the aforementioned constcamer paintings (ca. 74 by 105 cm) and appear to form a series in themselves. References to the cities of Antwerp and Brussels are far less abundant in the absence of the vista of the Palace of Coudenberg on the left, *kunstkast* and bouquet of flowers on the right, and several paintings decorating the rear wall in the center. Therefore, these variants were not included in the constcamer catalogue.

Lastly, there is one more painting from the studio of the Francken family that deserves our attention: *A Still Life of Shells, Paintings and Books on Recessed Shelves* [Fig. 276], attributed to Hieronymus Francken II (1578-1623). Obviously, the space shown in this still life is an opened cabinet instead of an interior, and as such it is not considered to be part of the constcamer genre. Nevertheless, some of the objects exhibited on the shelves do feature in many a constcamer painting associated with the Francken family, such as the seashells, (ceramic) cup, and (metal) sphere with smooth and shiny surface. The suspended, elliptical painting at the top closely resembles the *Burning City* as depicted in *An Art Gallery* [Cat. No. 13: elliptical], in the *Cabinet of Art and Curiosities* [Cat. No. 18: landscape format], and in the *Interior of a Collection of Paintings* [Cat. No. 27: round], among others [e.g. Cat.

Nos. 19, 59, 103]. This example clearly shows how freely reinterpretations were handled, if only in terms of format.

## Composing constcamer paintings

Other than a few textual sources relating to collectively created constcamer paintings, and the specific problems involved, no seventeenth-century instructions or descriptions about the creation process have survived. It may therefore be of use to draw a comparison with another type of painting, that of flower pieces, which was one of the specialties of a most influential creator of constcamers, Jan Brueghel I. Subsequently, an iconic constcamer painting by Willem van Haecht II will be studied to try to reconstruct, or perhaps better deconstruct, a painting by him for a better understanding of his working process. These two approaches aim to provide insight into how constcamer paintings were formed.

### Flower pieces: an analogy

It seems useful to compare constcamer paintings to flower pieces or seventeenth-century paintings that represent bouquets of flowers.<sup>898</sup> Flower pieces emerged in Antwerp in the second half of the sixteenth century.<sup>899</sup> Thirty-nine different flower pieces are included as a picture-within-picture, and an equal number of bouquets are depicted without frame, in the constcamer paintings included in the catalogue [Appendix A]. It is common knowledge that flower pieces depict arrangements of flowers that did not bloom at the same time. They

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<sup>898</sup> For the most recent and comprehensive study on this topic, see Segal and Alen, *Dutch and Flemish Flower Pieces*. For a similar comparison between flower pieces and *Wunderkammern*, see Ganz, *Neugier & Sammelbild*, 166–74.

<sup>899</sup> Bass, “Florilegium,” 12.

could never be seen together in real life and are therefore considered to be pictures of collectibles.<sup>900</sup> Jan Brueghel I was the creator of numerous flower pieces and explained his way of working in letters from 1606.<sup>901</sup>

On April 14, 1606, Brueghel I wrote to his patron Cardinal Federico Borromeo, Archbishop of Milan, that he started working on a painting of a bouquet “painted from life,” specifically commenting on “the beauty and rarity of various flowers which are unknown and have never been seen here before: I therefore went to Brussels to portray a few flowers from life which cannot be seen in Antwerp.”<sup>902</sup> The resulting *Vase of Flowers with Jewel, Coins and Shells* [Fig. 246] abundantly depicts “more than a hundred, most of them extremely rare and beautiful” flowers, approximately life-size. In a letter of August 25, 1606, Bruegel I furthermore mentions that underneath the flowers he “painted a jewel with coins, with rare objects from the sea. It is up to your honour to judge whether or not flowers surpass gold and jewels.”<sup>903</sup>

These comments are revealing and also relevant within the context of constcamer paintings. First of all, the realistic or naturalistic properties of the depicted elements are stressed. Jan I supposedly observed the flowers with his own eyes, some of them in Brussels at the archducal court where he portrayed (*ritrare*) and thus documented their visual properties such as colors and dimensions.<sup>904</sup> At a later stage the carefully drawn models would be combined in a painted composition in which each bloom can be identified. The individual flowers are depicted at their most beautiful, in full bloom, perhaps representing

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<sup>900</sup> Alpers, “The Studio,” 407–8.

<sup>901</sup> Brenninkmeijer-de Rooij and Ekkart, *Roots of Seventeenth-Century Flower Painting*, 11 & passim.

<sup>902</sup> Brenninkmeijer-de Rooij and Ekkart, 49.

<sup>903</sup> Brenninkmeijer-de Rooij and Ekkart, 50.

<sup>904</sup> Brenninkmeijer-de Rooij and Ekkart, 87 (note 16).

“universals” or idealized, composite images, rather than “particulars” or unique specimens with their imperfections.

The challenges of delineating plants in colors were already described by Pliny (see chapter 8). In addition, his story of Pausias, pupil of Apelles and painter of flowers, emphasized the contest between art and nature. Brueghel I gave another twist to this competition. According to him, there is a contest within the painting between painted nature (*le fiori*) and painted artifice (*ori et Gioii*).<sup>905</sup> However, there is a caveat when it comes to the fidelity of the painted representations in Jan I’s flower pieces, and this concerns the proportions of the flowers relative to each other. These proportions are not always correct. At the bottom right of the bouquet [Fig. 246], for example, the snake's head fritillaries are depicted twice as large as the nearby narcissus, while in reality the reverse is true.<sup>906</sup>

The practice of combining direct observation with models in a single composition seems to be illustrated in the constcamer painting *Allegory of Painting* [Cat. No. 38], in which a modest bouquet and some cut flowers are juxtaposed with a grand flower piece that Pictura is actively working on. A striking feature of flower pieces, in this constcamer painting depicted both as picture (e.g. bouquet) and picture-within-picture (e.g. *Flowers in a Vase*), is the absence shadows.<sup>907</sup> As such flower pieces did not serve to study natural light, but to recognizably capture and immortalize the likenesses of a wide variety of flowers.<sup>908</sup> The same can be said of the constcamer genre with regard to the collections they display.

Recognizability of the individual elements seems to be of primary concern in the constcamer paintings. This is in contrast with contemporary interior paintings created in the

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<sup>905</sup> Brenninkmeijer-de Rooij and Ekkart, 87 (note 18).

<sup>906</sup> Brenninkmeijer-de Rooij and Ekkart, 50.

<sup>907</sup> Brenninkmeijer-de Rooij and Ekkart, 54–55.

<sup>908</sup> Brenninkmeijer-de Rooij and Ekkart, 71.

Protestant northern Netherlands by artists such as Johannes Vermeer (1632-1675). His *Woman Reading a Letter* [Fig. 280], for example, reflects an entirely different approach to realism.<sup>909</sup> Objects painted after nature and other elements were brought together in a more explicitly imaginary configuration in the constcamer paintings from the Catholic southern Netherlands. This is best examined in more depth by looking at an iconic example.

### *Apelles Painting Campaspe*

Willem van Haecht II was a prominent creator of constcamer paintings, and his works were also mentioned as such in the inventory drawn up after his death in 1637 (see above).<sup>910</sup> His *Apelles Painting Campaspe* [Cat. No. 8] of around 1630 shows a grand room with large windows on the left. Through a framed opening a vaulted hallway can be seen that leads to a semicircular, domed sculpture gallery. Numerous figures are present in these interior spaces, most of whom surround a painter at work behind his easel. This figure represents the legendary Apelles, who according to Pliny “surpassed all the other painters who either preceded or succeeded him.”<sup>911</sup> Pliny furthermore recounts that Alexander the Great, standing next to the painter, asked Apelles to make a portrait of Campaspe (or Pancaste), his favorite concubine. While doing so, Apelles fell in love with her, and as soon as Alexander noticed, he presented Campaspe to Apelles; so great was his appreciation of the painter.

This mythical story complimented both the artist and the patron, who in this case could be equated with van Haecht II and his patron, Cornelis van der Geest. The number of works of art depicted in the urban villa far exceeds the number of visitors. Fifty-three paintings decorate the walls, and a similar number of sculptures is on display. In addition, a

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<sup>909</sup> Alpers, “The Studio,” 406.

<sup>910</sup> Duverger, *Antwerpse Kunstinventarissen: 4*, 90, 91 & 112.

<sup>911</sup> Pliny, *The Natural History*, 35.36.

wide variety of objects can be discerned, such as a terrestrial globe, an armillary sphere, Persian faience, prints and drawings, coins and seashells. The pictured collection reflects that of van der Geest, who owned paintings by contemporary Flemish artists, their predecessors, and their Southern European counterparts (see chapter 7). An unusually large number of the paintings depicted in *Apelles Painting Campaspe* can be identified and the associated information, especially the dimensions, can thus be compared.

#### Re-imagining spatiality

Twenty-two out of the thirty-seven paintings represented in the main room in *Apelles Painting Campaspe* can still be recognized [Fig. 230]. From seventeen of those the dimensions are known, allowing them to be compared in relation to each other and to the room as a whole.<sup>912</sup> The four paintings above the *kamerlijst* on the rear wall [Cat. No. 8] were all identified and formed the basis for calculating the approximate dimensions of the main room. The rear wall is estimated to be a monumental seven-and-a-half meters high and ten-and-a-half meters wide, with an opening of about five meters in height by three meters in width. The visible part of the wall on the right is about four-and-a-half meters wide. Based on these rough calculations a sketch of the interior was made that could then be used to incorporate a selection of paintings.<sup>913</sup>

When the seventeen paintings with known dimensions are placed in the sketched interior and arranged according to van Haecht II's *Apelles Painting Campaspe* [Cat. No. 8], it immediately becomes clear that the artworks do not fit the walls in the same way [Fig. 231]. In van Haecht II's imagined space, larger than life, the paintings are illusionistically presented

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<sup>912</sup> My thanks go to Milou Goverde (Mauritshuis), who shared a high-resolution image of *Apelles Painting Campaspe* (photographed by Margareta Svensson) with me, which enabled a detailed study of this painting.

<sup>913</sup> These measurements were taken with the aid of Adobe Photoshop (Image -> Analysis).

in enlarged or reduced size in order to enhance a uniform surface distribution. In doing so, the artist made use of artistic license, but in most cases still adhered to the original proportions of the individual paintings. The dimensions of the paintings shown on the rear wall can be compared most easily because of their frontal view. By comparing the known dimensions with the painted dimensions, it could be established that, with the exception of *Apollo and Daphne*, the height-width ratio remained unchanged [Fig. 232].<sup>914</sup>

To better understand the manipulation of relative dimensions by van Haecht II in his *Apelles Painting Campaspe* [Cat. No. 8], all paintings except the unfinished portrait of *Campaspe* were framed and placed together in the main room [Fig. 233]. The three-dimensional frames were freely recreated, mainly based on the painted frames [Fig. 282].<sup>915</sup> Details such as the rails and curtains that accompany eight of the depicted paintings were omitted. By adjusting the dimensions of the paintings relative to each other and to the space, it became possible to create a similar view. An important role in this is played by the perspective construction within the constcamer painting.

#### Vanishing point

When the lines that form the three-dimensional space on the two-dimensional surface or picture plane in *Apelles Painting Campaspe* [Cat. No. 8] are extended, we see that they converge in a single point [Fig. 283]. A one-point perspective is therefore at the basis of van Haecht II's constcamer painting. Careful study of this vanishing point in the painting revealed the actual point on the panel from which these lines were once drawn [Fig. 284].

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<sup>914</sup> Note that *The Bean Eaters*, displayed on the top left of the right wall, changed format altogether. The painting is reproduced in landscape format while the original is in portrait format. This is not uncommon within the constcamer genre, see for example the *Burning City* discussed above.

<sup>915</sup> Further sources consulted are Thiel and Bruyn Kops, *Framing in the Golden Age*; Verougstraete, *Frames and Supports*.

Instructions for the creation of interiors in one-point perspective were widely available around 1630, for example through Vredeman de Vries' *Perspective*. In *Plate 28* [Fig. 51] the horizon line ("*Orison*") is placed at eye level, whereas van Haecht II placed his horizon line higher (at approximately 2.3 meters). He furthermore reduced the length of the figures relative to the space to make the latter seem more imposing.

### Squaring

Van Haecht II had one more trick up his sleeve when reproducing the paintings within the constcamer, namely squaring for transfer.<sup>916</sup> This was a common technique used to transfer an image from one surface to another. By placing a network of squares over a drawing [Fig. 285], for example, the image could be recreated in the desired size on the desired surface. In this way compositions could not only be copied relatively easily, but also enlarged or reduced in size. Traces of this practice can be found in some of van Haecht II's reproductions such as *Venus in the Forge of Vulcan*, attributed to Otto van Veen.

In *Apelles Painting Campaspe* [Cat. No. 8], *Venus in the Forge of Vulcan* can be found just below the vanishing point on the left [Fig. 284]. This same painting can be found in *The Picture Gallery of Cornelis van der Geest* [Cat. No. 9], right next to the *Portrait of Paracelsus*. The photograph taken after the latest restoration of this constcamer painting (in 2009) shows that the paint layers have slightly faded, which makes the squaring visible in several pictures-within-pictures [e.g. Fig. 281].<sup>917</sup> This technique was especially useful for the reproduction of paintings in miniature that are perpendicular to the picture plane, in other words that are represented against the rear wall, and that is precisely where we find these

<sup>916</sup> Wouk, *Frans Floris*, 200; Wallert, Hermens, and Peek, *Historical Painting Techniques*, 168–70.

<sup>917</sup> I am very grateful to Ben Van Beneden and Martine Maris (Rubenshuis) for sharing this photograph with me.

cases of squaring. These are the most direct traces of copying that could be observed in the constcamer catalogue [Appendix A].

## Summary: fiction and reality

The first expressions of the constcamer genre can be traced with certainty to the early seventeenth century. The first dated constcamer painting is from 1608 and shows the influence of the practice of constructing linear perspective that was emerging in Antwerp at the time. This kind of artificial perspective was promoted by Vredeman de Vries, an expert in the field who designed interior views with an eye for objects and persons placed within them. Such pictorial predecessors, executed in print and painting, were accompanied by other genres such as that of the elegant company and market scenes, particularly those of the annual indoor fair at Prague Castle.

Constcamer paintings were not created in a vacuum. Therefore, a definition is needed against which a painting can be evaluated in order to determine whether or not it is part of the genre, based on a modern understanding. Assessments were made on the basis of place and time of creation, overall composition, individual depictions, and the presence of symbolic overtones in a painting that represents a collection of sorts. Some of the key features of the constcamer genre are the recognizability of the depicted elements and the free handling of their proportions. In short, constcamer paintings usually exhibit existing elements in a fictional setting, and thus have both realistic and imaginary properties.

Contemporary inventories offer minimal descriptions of some constcamer paintings, which nevertheless showed that such artworks were also in demand locally and came into the possession of Antwerp artists, merchants, nobles, clerics, and the like. A close

examination of the work of van Haecht II furthermore exposed some of the artist's working methods, and how he conceived of such an interior in the first place. The use of one-point perspective, the allocation of ideal proportions, and the use of squaring as a tool to transfer an image from one surface to another emphasize his systematic ways of production and reproduction. Van Haecht II's method may be representative of the formation of constcamer paintings by other artists, although it is not known to what extent.

# 10 Analysis of the constcamer genre

The constcamer dataset [Appendix C] currently contains 161 constcamer paintings. All constcamer paintings were executed in oil paint on either panel (52%), canvas (30%), or copper (15%), if known. Their dimensions range from 16 by 30 centimeters [Cat. No. 130] or 0.04 square meters [Fig. 314], to 176 by 264 centimeters [Cat. Nos. 16 and 137] or 4.6 square meters [Fig. 315]. The most common surface area sits right in between and is about 0.4 square meters (ca. 50 by 70 cm). The current locations of constcamer paintings, if known, were plotted on a map of Europe [Fig. 286] and North America [Fig. 287]. About half of the constcamer paintings (81 out of 161) are privately owned, and those without a known current location (78 out of 161) are not indicated on the respective maps.

Such findings could be obtained based on the overview created. This chapter focuses on the qualitative analysis of the constcamer catalogue, and how a dataset can contribute to the study and understanding of the genre. As a starting point, we will look at then existing collections that could be identified within the constcamer genre. Subsequently the practice of creating pendants, series and variants will be discussed. This will highlight the importance of creators, collaborators, and imitators in terms of chronology and typology. The annotated overview of the constcamer genre particularly facilitated the identification of repetitions and the comparison of subjects and objects depicted more than once in different constcamer paintings. As a result, previously undiscovered cross-references could be made.

## Collections depicted in constcamers

The collections depicted in constcamer paintings can usually not be related to material collections known, for example, from inventories. Notable exceptions are the collections of Archdukes Albert and Isabella, and of Archduke Leopold Wilhelm – sovereigns of the Spanish Habsburg Netherlands from 1598 to 1621, and 1647 to 1656, respectively – Cornelis van der Geest (an Antwerp merchant), Nicolaas Rockox (mayor of Antwerp), Władysław IV Vasa (king of Poland), Pierre Roose (president of the Brussels Privy Council), his nephew Pierre-Ferdinand Roose (counselor of the Court of Brabant), and the Francken family of painters, who produced numerous constcamer paintings in which objects owned by the family recur. These exceptions are elaborated in this section.<sup>918</sup>

The collection of Archdukes Albert and Isabella formed the basis of the pendants *Sight and Smell* [Cat. No. 16] and *Taste, Hearing and Touch* [Cat. No. 137]. Their collection can furthermore be linked to the series of the *Five Senses* [Cat. Nos. 17, 134, 135, 136, and Fig. 66]. Both the pendants and the series will be discussed in more detail in the next section. The collection of Archduke Leopold Wilhelm was the point of departure of numerous paintings by David Teniers II and his followers. Sometimes these include a portrait of the Archduke [Cat. Nos. 42, 43, 69, 70, 75, 77, 79, 82, 109, 118, 152, 159], sometimes not [Cat. Nos. 66, 74, 78, 153, 154]. But his painting collection is easily recognizable in all of them. More details on these variants will also follow below.

Cornelis van der Geest appointed Willem van Haecht II as curator of his collection.<sup>919</sup>

Artworks from this collection feature in most of the constcamer paintings created by van

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<sup>918</sup> The constcamer painting that depicts the collection of Peter Linder (a German merchant in Milan) is not included here, because except for the painting [Cat. No. 73] nothing is known about his collection.

<sup>919</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 58.

Haecht II [Cat. Nos. 8, 9, 15, 34, 45], except for one. The *Interior of the Salon of the Archduchess Isabella of Austria* [Cat. No. 55] portrays Isabella as a visitor dressed in the habit of the Poor Clares, the Catholic order that she joined after the death of Albert in 1621.<sup>920</sup> This garment is also shown in the *Portrait of Isabella Clara Eugenia as Widow* [Cat. Nos. 43 and 74]. Albert and Isabella appear together as visitors in van Haecht II's *The Picture Gallery of Cornelis van der Geest* [Cat. No 9] of 1628.

In *The Archdukes Visiting the Collection of Pierre Roose* [Cat. No. 49] the Archdukes are portrayed in the company of a man reminiscent of Pierre Roose (1586-1673), whose collection is presumably on display.<sup>921</sup> This constcamer was reproduced in whole [Cat. Nos. 28, and 53] and in part [Cat. No. 116], but without Pierre Roose and the Archdukes. Two more constcamer paintings [Cat. Nos. 51 and 68] show kinship with *The Archdukes Visiting the Collection of Pierre Roose*.

Pierre-Ferdinand Roose (1631-1700) poses in the *Picture Gallery in the Former Palais Granvelle in Brussels with a Portrait of Pierre-Ferdinand Roose* [Cat. No. 47]. His estates of Bouchout and Froidmont are represented as paintings within the picture gallery. About a century earlier, the art collector Cardinal Antoine Perrenot de Granvelle (1517-1586) had ordered the Granvelle Palace in Brussels to be built. It was demolished in 1931.<sup>922</sup> If the constcamer painting is meant to represent Pierre-Ferdinand Roose's collection, it shows only a small fraction of his possessions.<sup>923</sup>

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<sup>920</sup> Kolb, *Jan Brueghel the Elder*, 73–74; Woollett and van Suchtelen, *Rubens & Brueghel*, 101.

<sup>921</sup> In October 2015, Danielle Maufort identified the collector as Pierre Roose. See <https://www.daniellemaufort.com/> (accessed January 4, 2021); Göttler, ““Indian Daggers with Idols,”” 105 (note 94).

<sup>922</sup> <http://balat.kikirpa.be/object/20057610> (accessed January 4, 2021).

<sup>923</sup> For the inventory of Pierre-Ferdinand Roose, see the State Archives in Brussels, “*Notariaatsarchieef*, N890/1: notaris C.F.E. Catz (1700-1701), s.f.º,” via <https://www.daniellemaufort.com/boedelinventaris.html> (accessed January 4, 2021).

The house and collection of Nicolaas Rockox inspired *Supper at the House of Nicolaas Rockox, Mayor of Antwerp* [Cat. No. 33]. Rockox famously commissioned Rubens' *Samson and Delilah* (1609-1610), which is proudly displayed in the center above the fireplace.<sup>924</sup> In *Prince Władysław IV Vasa's Kunstkammer* [Cat. No. 76], the collection of Władysław IV Vasa is partly on display. This constcamer painting was commissioned by the Prince, whose portrait is included twice: in the form of a portrait painting and as a gold medal in the lower right corner.<sup>925</sup> Władysław IV Vasa went on a Grand Tour through Europe from 1624 to 1625, and as a result he is also portrayed among the visitors in *The Picture Gallery of Cornelis van der Geest* [Cat. No 9].<sup>926</sup>

Frans Francken I's offspring and workshop often reproduced certain objects, for example a flask with wax flowers inside them [Cat. No. 19], and "a big box with three drawers of shells" [e.g. Cat. No. 21], that are thought to have been owned by the family.<sup>927</sup> As Rijks has demonstrated, painters did indeed establish their own collections, objects of which sometimes feature in their constcamer paintings. The recurrence of certain elements such as a padlock [Cat. Nos. 13, 18, 19, 23, 65, 115] and a dried seahorse [Cat. Nos. 13, 18, 21, 23, 65, 115] in constcamer paintings created exclusively by the Francken family suggests that they owned, or at least had easy access to, these objects.

In addition, it is known with certainty that Frans Francken I owned the *Nativity of Christ* by Aert Claesz. (1498-1564), also known as Aertgen van Leyden.<sup>928</sup> This painting subsequently passed on to the collection of Rubens and is documented in the collection of

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<sup>924</sup> <https://www.nationalgallery.org.uk/paintings/peter-paul-rubens-samson-and-delilah> (accessed January 4, 2021).

<sup>925</sup> <https://rkd.nl/explore/images/233549> (accessed January 4, 2021).

<sup>926</sup> Grusiecki, "Connoisseurship from Below," 217–18.

<sup>927</sup> Rijks, "Catalysts of Knowledge," 53, 112 & 252–53.

<sup>928</sup> Speth-Holterhoff, *Les Peintres Flamands*, 60; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 39.

Peeter Stevens after 1640.<sup>929</sup> Nevertheless, the *Nativity of Christ* features in various formats, both landscape and portrait, in constcamer paintings created by or associated with various members of the Francken family [Cat. Nos. 20, 41, 97, 112, 155].

## Pendants, series, and variants

When looking at the constcamer genre as a whole, it becomes apparent that the examples included in the catalogue are rarely unique. On the level of the overall composition, we can establish a number of different relationships. A pair of paintings that belong together are considered pendants. When more than two paintings are created as a unit, then they form a series. For example, van Kessel I created four constcamers together with Erasmus Quellinus II with the four continents as the organizing principle [Cat. Nos. 89, 148, 149 and 150].<sup>930</sup> Furthermore, more or less exact copies or derivatives of compositions can be discerned, which are understood as variants. Such types of relatedness are central to this section.

### Five Senses

One or several of the five senses – sight, hearing, taste, touch, and smell – form the allegorical theme of no less than twenty-five paintings (about 16%) of the constcamer catalogue.<sup>931</sup> Because of their prominence within the constcamer genre, the pendants, series and variants with such a theme related to the five senses will be the first to be discussed.

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<sup>929</sup> Briels, “Amator Pictoriae Artis,” 194.

<sup>930</sup> Ferdinand van Kessel I, Jan I’s son, would continue to produce similar works. Since the personifications of the continents are not situated in interior settings, his series [Figs. 206 to 209] is not included in the catalogue.

<sup>931</sup> Cat. Nos. 16, 17, 24, 39, 50, 54, 56, 57, 84, 85, 86, 96, 99, 126, 127, 128, 129, 131, 133, 134, 135, 136, 137, 144, and 158.

## Pendants

A famous duo of paintings, *Sight and Smell* and *Taste, Hearing and Touch*, was commissioned in 1615. Completed in 1618, they were presented to the Archdukes by the magistrates of the city of Antwerp.<sup>932</sup> About a dozen leading Flemish painters collaborated under the supervision of Jan Brueghel I on these unprecedented masterpieces, which enabled the passionate collectors Albert and Isabella to possess, through these two paintings, representative works of the entire Antwerp school of painting of their time. Initially the Archdukes placed the pendants in the audience hall of the Castle of Tervuren, but later moved them to the Palace of Coudenberg in Brussels. In 1731, the original pair was lost in a fire, but contemporary copies still exist [Cat. Nos. 16 and 137]. By 1633, these two copies were already in Spain.<sup>933</sup>

*Sight and Smell* was copied once more in 1660 by Jan Boots [Cat. No. 96] on a somewhat reduced scale, which nevertheless confirms that both [Cat. Nos. 16 and 96] were faithful copies after the lost original. Several objects represented in the copies of the pendants [Cat. Nos. 16, 96 and 137] are known to have been part of the collections of the Archdukes, and also appear in the *Five Senses* series.

## *Five Senses* series

The *Five Senses* series consists of five panels, each depicting one of the senses. Although the series has been studied extensively, there is still a lot of ambiguity concerning, for instance,

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<sup>932</sup> In October 1618 the city of Antwerp bought from Brueghel “two ingenious paintings, representing the Five Senses, on which twelve of the best [unnamed] masters of this city have worked, to be presented to Their Most Illustrious Highnesses.” Woollett and van Suchtelen, *Rubens & Brueghel*, 94.

<sup>933</sup> <https://www.janbrueghel.net/object/allegory-of-sight-and-smell> (accessed January 4, 2021); Díaz Padrón and Royo-Villanova, *David Teniers*, 154–75.

the commissioner(s) and intended recipient(s).<sup>934</sup> Based on technical analysis, some have suggested that the paintings were created on the initiative of the artists Jan Brueghel I and Peter Paul Rubens themselves, both court artists to the Archdukes.<sup>935</sup> Brueghel is generally seen as the *inventor* of the series, which Rubens complemented with figures.<sup>936</sup>

Four of the five paintings of the series (see chapter 9) are part of the constcamer catalogue [Cat. Nos. 17, 134, 135, 136], and their order of creation is uncertain. Three paintings of the *Five Senses* series bear Brueghel's signature [Cat. Nos. 17 and 136, and Fig. 66].<sup>937</sup> Furthermore, two of those are dated: the *Allegory of Sight* [Cat. No. 17] is dated 1617, while the *Allegory of Taste* [Cat. No. 136] is dated 1618. These dates seem to indicate that the series was initiated with the sense of sight, while work on the aforementioned pendants [e.g. Cat. Nos. 16 and 137] had started but had not yet been completed (1615-1618).

Since the *Five Senses* series was conceived as a series, it is useful to consider their intended display. The red draperies included in the *Allegory of Sight* [Cat. No. 17], the *Allegory of Touch* [Cat. No. 135], and the *Allegory of Hearing* [Cat. No. 134] can be used as a guideline for this purpose. Based on the placing of the draperies, it is possible to infer that the intention was to hang the panels side by side, with the *Allegory of Touch* in the center. If, in addition, the female figures or personifications of the senses are taken into account, the following can be observed. Both Sight and Taste look to the right, while Smell and Hearing look to the left. In terms of composition, the following order makes most sense. From left to right, the series starts with Sight (signed and dated 1617), followed by Taste (signed and dated 1618), Touch, and Smell (signed), and ends with Hearing. It is therefore likely that the

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<sup>934</sup> For one of the most recent investigations of the series, see Woollett and van Suchtelen, *Rubens & Brueghel*.

<sup>935</sup> Woollett and van Suchtelen, 242–45.

<sup>936</sup> Woollett and van Suchtelen, 90–99.

<sup>937</sup> BRVEGVEL. F. 1617 [Cat. No. 17]; BRVEGHEL. FE. 1618 [Cat. No. 136]; BRVEGHEL [Fig. 66].

undated panels representing Touch, Smell and Hearing were created at the earliest in 1618, but possibly in the following years (this is significant for chapter 11).

References to the Archdukes and their collections feature prominently in the *Five Senses* series, as do their palaces [Appendix D.13] – the Palace of Coudenberg in the *Allegory of Sight*, the Castle of Mariemont in the *Allegory of Hearing* [see also Cat. No. 137], the Castle of Tervuren in the *Allegory of Taste*, and possibly the Palace of Coudenberg and adjacent Warande park in the *Allegory of Smell*.<sup>938</sup> The *Allegory of Touch* is situated in ruins that reflect contemporary sketches and drawings of Roman sites such as the Baths of Diocletian and the Colosseum, which Jan Brueghel I recorded himself during his stay there.<sup>939</sup> The figures of Touch and Cupid painted by Rubens are furthermore reminiscent of an emblem by his teacher Otto Veen, namely the emblem entitled *Celari Uult Sua Furta Venus* from his *Amorum Emblemata* (Antwerp: 1608).<sup>940</sup>

The female figures have been interpreted in various ways in the literature on this series.<sup>941</sup> In four of the paintings the woman is accompanied by a nude boy. Twice this *putto* or Cupid has wings [Cat. Nos. 17 and 135], and twice the *putto* is depicted without wings [Fig. 66 and Cat. No. 314]. Only once is the woman accompanied by a satyr [Cat. No. 136]. Traditionally, touch was considered to be the lowliest of the senses, because it was the most corporeal. It is flanked by taste and smell, which also require physical contact in order to experience them.<sup>942</sup> The most noble senses, sight and hearing, can be found at the

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<sup>938</sup> From 1992 onwards, the connection between the series and the collections of the Archdukes is widely accepted. On this subject, see especially Müller Hofstede, “Non Saturatur Oculus Visu,” 1984, 265; Díaz Padrón and Royo-Villanova, *David Teniers*, 114; Welzel, “Armoury and Archducal Image,” 99–106.

<sup>939</sup> Woollett and van Suchtelen, *Rubens & Brueghel*, 7–8.

<sup>940</sup> Available online via <https://archive.org/details/amorumfigurisaen00veen/page/113/mode/2up> (accessed June 1, 2020); Woollett and van Suchtelen, 56. The title of the emblem, taken from Ovid, is translated as “Love lycketh darkness.”

<sup>941</sup> E.g. Díaz Padrón and Royo-Villanova, *David Teniers*.

<sup>942</sup> McFadden, “Food, Alchemy, and Transformation,” 47.

extremities. That the female figures indeed represent the five senses is moreover confirmed by the attributes in the form of animals that accompany them.

The animals accompanying the five senses seem to allude both to Ripa's *Iconologia* and the local tradition of representing the senses. In the *Allegory of Sight* [Cat. No. 17] only an indirect attribute can be found, incorporated in the chandelier. The eagle, usually associated with sight, is present in the form of the double-headed Habsburg eagle that crowns the chandelier. The personification of hearing [Cat. No. 134] is playing a lute in the company of a deer. The sense of smell [Fig. 66] is surrounded by flowers, a civet and a dog, known for his keen smell for hunting. Taste [Cat. No. 136] has a South American tamarin monkey with her that is eating while seated on the backrest of her chair.<sup>943</sup> Lastly, the *Allegory of Touch* [Cat. No. 135] displays a turtle, a spider, and a scorpion. Especially the attributes of this last sense do not correspond to Ripa's prescriptions.<sup>944</sup> Instead, this representation reflects local practices as shown for example by Marten de Vos [Figs. 67 to 71].<sup>945</sup> The same symbols can be found in the *Allegory of the Five Senses* [Fig. 176] – eagle, deer, dog, monkey and turtle – created contemporaneously (1617-1618) by Jan Brueghel I and Hendrik van Balen I.<sup>946</sup>

In his *Iconologia*, Cesare Ripa explicitly refers to Aristotle in his description of the sense of sight. He states that Aristotle judged sight to be the most noble of the senses, since it helps us to bring obscure things to light by means of the intellect (see chapter 7).<sup>947</sup> This preference of the sense of sight above the other senses was common at the beginning of the

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<sup>943</sup> McFadden, 46.

<sup>944</sup> Ripa, *Iconologia*, 447–51.

<sup>945</sup> The spider refers to Thomas de Cantimpré's mnemotechnic verses: "*Nos aper auditu, lynx visu, simia gustu, Vultur odoratu praecellit, aranea tactu.*" See Ripa, 449; Nordenfalk, "The Five Senses," 1. The scorpion probably refers to Mars, the god of war in armor, who reigned over the signs of the Zodiac Scorpio and Aries. See for example <http://hdl.handle.net/10934/RM0001.COLLECT.30854> (accessed June 2, 2020).

<sup>946</sup> Honig, *Jan Brueghel*, 54–55.

<sup>947</sup> Ripa, *Iconologia*, 447.

seventeenth century [e.g. Fig. 251] and might help explain why Brueghel II and Rubens started their series with this sense in particular. The sense of sight was furthermore most important to both the creation and the appreciation of works of art.

Thus, the Peripatetic axiom that “no one can learn or understand anything in the absence of sense” (see chapter 7)<sup>948</sup> functioned as an ordering system for the archducal collections, as represented in the *Five Senses* series.<sup>949</sup> As a result the five panels pertain to both the senses and the intellect. On a metaphoric level, one could argue that the pictorial content of the *Five Senses* series, grounded in the material and intellectual aspirations at the court of the Archdukes, provided access to knowledge of the world. The sense of sight, both physical and metaphysical, fuels man’s desire for knowledge through *thauma*. In the same way that the contemplation of curiosities in cabinets was thought to lead to enquiry and the dispelling ignorance (see chapters 4 and 6), so too could this role be fulfilled by paintings, or perhaps especially by paintings, according to van Mander (see chapter 8).

#### Prints of the *Five Senses* series

The RKD has a series of prints in their collection that belong to the *Theatrum artis pictoriae quo tabulae depictae quae in Caesarea Vindobonensi Pinacoteca servantur leviores caelatura aeri insculptae exhibentur ab Antonio Iosepho de Prenner* (Vienna: 1728-1733), published in four volumes. These etchings were produced for the imperial court at Vienna and depict the collection in the galleries of the Stallburg. When Leopold Wilhelm was no longer Governor of

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<sup>948</sup> Aristotle, *De Anima*, 432a8; <https://psychclassics.yorku.ca/Aristotle/De-anima/de-anima3.htm> (accessed November 12, 2020).

<sup>949</sup> The catalogue of the 1998 exhibition *Albert & Isabella 1598-1621* was partly arranged according to the five senses, without any reference to the Peripatetic axiom. See Duerloo and Thomas, *Albrecht & Isabella*. As early as 1879, Max Rooses suggested that the *Five Senses* series actually depicted the collections of the Archdukes, again without referring to Aristotle’s passage as a guiding principle. See Rooses, *Geschiedenis Der Antwerpsche Schilderschool*, 199. On visual taxonomies and the Five Senses as an ordering system within constcamer paintings in general, see Peterson, “The Five Senses.”

the Spanish Habsburg Netherlands (1656), he moved his collection from the Palace of Coudenberg in Brussels to the Stallburg [Fig. 83] in Vienna. The artworks remained there until 1781.<sup>950</sup> Later this collection would become the core of the collections of the Kunsthistorisches Museum, where the majority is preserved to this day.

Anton Joseph von Prenner published his *Theatrum artis pictoriae* containing reproductions of the *Five Senses* series [Figs. 76 to 80], which he attributed to Hans Jordaens III (“*Ioann Iordans Pinxit*”). Intriguingly, this suggests that the imperial collection in Vienna would have housed a copy of the series around 1730. The print of the *Allegory of Sight* [Fig. 76] looks similar to the original *Allegory of Sight* [Cat. No. 17] painted by Brueghel I and Rubens. Characteristically it shows the double portrait of Archdukes Albert and Isabella, which is missing in other painted copies [e.g. Cat. Nos. 24 and 54]. The inscription seems to indicate that Hans Jordaens III was responsible for the painted reproductions on which the prints are based, since it is known that the *Five Senses* series itself was kept at the Royal Alcázar in Madrid at the time, and the Buen Retiro Palace shortly after.<sup>951</sup>

Nowadays the copied series are absent from the collection of the Kunsthistorisches Museum in Vienna. When comparing von Prenner’s prints with the original *Five Senses* series, a number of deviations can be observed, which seems to indicate that the copyist was not familiar with some of the objects he reproduced (see chapter 11). The Vienna collection does include another constcamer painting that was rendered in print by von Prenner. It is the *Cabinet of Art and Curiosities* [Cat. No. 4], created by Hans Jordaens III and Cornelis de Baellieur I, presumably around 1630. Von Prenner’s rendition [Fig. 82] is again

<sup>950</sup> <https://www.khm.at/en/visit/collections/picture-gallery/history-of-the-collection/> (accessed June 3, 2020).

<sup>951</sup> <https://www.museodelprado.es/en/the-collection/art-work/the-sense-of-sight/494fd4d5-16d2-4857-811b-e0b2a0eb7fc7> (accessed June 3, 2020); Woollett and van Suchtelen, *Rubens & Brueghel*, 94.

attributed to Jordaens III, who signed the work with “*Hans.Jordans.F.*”<sup>952</sup> De Baellieur I had contributed by painting the figures, in a similar manner as Rubens had contributed to Brueghel I’s paintings of the senses.

#### Allegories of sight

Jan Brueghel II and his nephew Jan van Kessel I [Fig. 273] created numerous paintings after the *Allegory of Sight* [Cat. No. 17] as well as the other senses [e.g. Fig. 84]. Their allegories of sight, painted on copper and signed “J VAN. KESSEL f” (dated 1659) [Cat. No. 39] and “J Breugel” (ca. 1660) [Cat. No. 84], respectively, might have been intended to be part of a series as well, but they have survived in isolation.<sup>953</sup> Presumably these two signed examples served as the model of eight other constcamer paintings that are closely related in composition [Cat. Nos. 56, 57, 85, 86, 126, 127, 129, 133]. One of these, however, has a slightly different composition [Cat. No. 133]. This is a painting on panel by Frans Wouters (1612-1659), which has been preserved together with an *Allegory of Taste* [Fig. 99] and an *Allegory of Touch* [Fig. 100]. If this attribution is correct, his *Allegory of Sight* [Cat. No. 133] might actually be the example that both van Kessel I and Brueghel II imitated.

Frans Wouters was court painter to Ferdinand II, Holy Roman Emperor, and was appointed court painter to Archduke Leopold Wilhelm in 1648. As such he was one of the predecessors of David Teniers II. Notable in Wouters’ *Allegory of Sight* [Cat. No. 133] are the reference to Rubens’ *pantheon* on the left, the *perpetuum mobile* in the middle (see chapter 11), and the view of Antwerp with its iconic Cathedral of Our Lady through the arched opening on the right [Appendix D.13]. Wouters was active in Antwerp between 1629 and

<sup>952</sup> <https://rkd.nl/explore/images/44191> (accessed June 3, 2020).

<sup>953</sup> See for example a series attributed to Jan Breughel II via <https://rkd.nl/explore/images/58403> (accessed January 5, 2021).

1635, and from 1641 to his death in 1659. Based on this information, it seems plausible that this constcamer painting was created between 1648 and 1659.<sup>954</sup>

The allegories of sight by van Kessel I and Brueghel II [Cat. Nos. 39 and 84] are strikingly different from each other. Following in the footsteps of his father, Brueghel II painted *The Garden of Eden* (lower right corner), a bouquet of flowers (upper left corner), and a double portrait of *Philip IV and Isabella of Bourbon* (upper right corner) [Cat. No. 84]. Van Kessel I, on the other hand, omits these elements (i.e. references to his grandfather) and instead included a *Study of Insects and a Snail* in the center of the painting, presumably his own invention [Cat. No. 39]. Both paintings and the variants based on them have similar dimensions [except for Cat. No. 127, which is smaller].

Even though all variants look largely the same, they differ in the details. Mainly the subjects of the paintings within the constcamer paintings are subject to change. Some of the copies more closely resemble van Kessel I's painting [Cat. Nos. 85, 86, 126], while others mimic Brueghel II's variant [Cat. Nos. 56, 57, 127, 129].<sup>955</sup> For example, the centrally placed red chair features representations of different monkeys. Initially this chair was occupied by a monkey looking at itself in a mirror, "aping" the female figure as it were. In the foreground, another monkey is inspecting a painting through eyeglasses held upside down in front of its eyes.<sup>956</sup> Such instruments affecting vision were appropriately included in allegories of sight (see chapter 13).

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<sup>954</sup> <https://www.dorotheum.com/en/l/1858061/> (accessed June 4, 2020); <https://rkd.nl/explore/artists/85666> (accessed January 5, 2021). The *Allegory of Sight* was once accompanied by four paintings of the other senses, of which two are still known to exist today [Figs. 99 and 100].

<sup>955</sup> Cat. No. 56 is included in RKD Explore twice: <https://rkd.nl/explore/images/263326>; <https://rkd.nl/explore/images/245959> (both accessed June 4, 2020). Before restoration the female nude was clad in drapery, see <http://www.sothebys.com/en/auctions/ecatalogue/2014/old-master-british-paintings-evening-114033/lot.15.html>; <http://balat.kikirpa.be/object/20058077> (both accessed June 4, 2020).

<sup>956</sup> Similar monkeys can be found in the *Allegory of Sight (Cabinet of the Naturalist)* [Cat. No. 158], signed and dated by Jan van Kessel I in 1664. This small work on copper used to be part of a series of the five senses, of which a second one can still be found in the same collection (i.e. the Gallerie degli Uffizi at Palazzo Pitti in

## Leopold Wilhelm and David Teniers II

David Teniers II undertook an extraordinary project as court painter to Archduke Leopold Wilhelm. As curator of the archducal collections, kept at the Palace of Coudenberg in Brussels, Teniers II reproduced a selection of 243 paintings in oil paint on a reduced scale. This selection of paintings was originally created by Italian masters, and formed the highlight of Leopold Wilhelm's collection that comprised 517 Italian and 880 northern European paintings in 1659. Almost all of Teniers II's copies were executed in reverse, because they functioned as models for engravings to be included in his publication entitled the *Theatrum Pictorium* (1660). To create this catalogue, Teniers employed a team of fourteen engravers for reproducing his painted copies with the humble dimensions of around 17 by 25 centimeters.<sup>957</sup> Many of the Italian originals are still part of the collection of the Kunsthistorisches Museum in Vienna [see Appendix C].

In addition to the *Theatrum Pictorium*, David Teniers II created numerous constcamer paintings that represent Leopold Wilhelm's paintings collection [Cat. Nos. 42, 43, 66, 69, 70, 74, 75, 77, 78, 79, 82, 109, 118, 152, 153, 154, 159]. These were sent as diplomatic gifts to European royal and princely houses.<sup>958</sup> Teniers II's was appointed court painter in 1651, which made him move from Antwerp to Brussels together with his wife Anna, a daughter of Jan Brueghel I [Fig. 273].<sup>959</sup> Teniers II created his first signed and dated representations of

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Florence). This *Allegory of Taste (Putti between Fruit and Fish)* depicts an exterior, rather than an interior, setting with a view of Antwerp in the background. See <http://catalogo.uffizi.it/it/29/ricerca/detailiccd/1417047/> (accessed January 7, 2021).

<sup>957</sup> Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*, 21; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 42–44.

<sup>958</sup> Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*, 15; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 39–41.

<sup>959</sup> Speth-Holterhoff, *Les Peintres Flamands*, 128–29; Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*, 12.

the archducal painting collection in the same year [Cat. Nos. 109 and 118]. Archduke Leopold Wilhelm is included as a visitor in these two as well as ten other constcamer paintings [Cat. Nos. 42, 43, 69, 70, 75, 77, 79, 82, 109, 118, 152, 159]. Some of them are almost identical copies [compare Cat. Nos. 118 and 42; 77 and 79; and the trio 69, 70, and 159], and only one of these is dated [Cat. No. 69] with the year 1653.

The other constcamer paintings that feature the archducal collection but not the Archduke himself [Cat. Nos. 66, 74, 78, 153, 154] are all undated and were presumably created after 1651. The total of seventeen constcamer paintings that feature Leopold Wilhelm's painting collection are characterized by a *horror vacui* of the walls, which are densely covered with paintings. Furthermore, the frames of these individual paintings are often inscribed with the names of the artists who were responsible for the originals. Gillis van Tilborgh II followed Teniers II both in function (as curator of the archducal collections, see chapter 9) and in style, and created a constcamer [Cat. No. 63] resembling two of the paintings associated with Teniers II [Cat. Nos. 153 and 154]. By then, however, Leopold Wilhelm had passed away, and his collection had been relocated to the Stallburg in Vienna [Fig. 83].<sup>960</sup> Perhaps as a result, van Tilborgh II's variant no longer features the same collection of paintings.

#### David Teniers II in his workshop

David Teniers II did not paint his first constcamer painting while in the service of Archduke Leopold Wilhelm in Brussels. As early as 1635 Teniers II created *The Artist in his Workshop* [Cat. No. 61], and the painter in this artwork has subsequently been interpreted as Teniers II

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<sup>960</sup> Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*, 23–25.

himself.<sup>961</sup> Several variants and replicas exist [Cat. Nos. 71, 80, 81, and 160]. Thomas van Apshoven is considered to be the creator of one of them [Cat. No. 80], while Ferdinand Apshoven supposedly created another [Cat. No. 160] (see chapter 9). The remaining two, also created after the 1635 model [Cat. No. 61], are both attributed to David Teniers II.

#### David Teniers II and the Francken workshop

Teniers II was certainly familiar with the constcamer paintings created by the Francken family, and acquired one himself dating from the 1620s [Cat. No. 41]. He worked on this painting by adding the three figures, the dog and the chair surrounded by three paintings, and then signed the composition with his name. These events took place around 1640.<sup>962</sup>

*The Interior of a Picture Gallery* [Cat. No. 41] was previously associated with the collection of Peeter Stevens, since he owned the *Nativity of Christ* by Aert Claesz. and the *Portrait of Cardinal Niccolò Albergati* at the time (see above and chapter 7).<sup>963</sup> However, Archduke Leopold Wilhelm acquired the portrait of the Cardinal in 1648, which could indicate that Teniers II made an addition after this date.<sup>964</sup> Two similar variants, without Teniers II's additions, still exist and are attributed to Frans Francken II and Hieronymus Francken III [Cat. Nos. 112 and 97].

It is furthermore thought that Teniers II created or contributed to another constcamer painting that was perhaps initiated by, or at least reminiscent of the creations of, Frans Francken II.<sup>965</sup> In this *Interior of an Art Cabinet with Cognoscenti* [Cat. No. 72] the

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<sup>961</sup> E.g. Speth-Holterhoff, *Les Peintres Flamands*, 131.

<sup>962</sup> Vegelin van Claerbergen et al., *David Teniers and the Theatre of Painting*, 68; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 39.

<sup>963</sup> Briels, "Amator Pictoriae Artis," 165 & passim.

<sup>964</sup> Briels, 180–83; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 39.

<sup>965</sup> Speth-Holterhoff, *Les Peintres Flamands*, 129; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 50 (note 75).

names of the artists responsible for the originals are sometimes inscribed on the frames of the represented paintings, a practice Teniers II applied more often in constcamer paintings by his hand [e.g. Cat. No. 43]. Based on the subject matter of the pictures-within-picture Teniers II is most likely its creator, even though the centrally placed cupboard bears similarities to those represented in a series of constcamer paintings associated with the Francken family [e.g. Cat. No. 119], as discussed in the next section.

#### Francken workshop variations

A number of constcamer paintings produced by Frans Francken II and his workshop, including family members, have striking similarities. Frans II created rather shallow spaces filled with objects and people, just like his father Frans I had done [e.g. Fig. 57]. The most repeated representation of a constcamer painting within the catalogue adheres to this formula [Cat. Nos. 22, 29, 46, 58, 59, 60, 113, 114, 119, 156, and 161]. These eleven paintings show little variation in composition and depicted elements, compared with the above mentioned ten variations on the allegory of sight [e.g. Cat. No. 133]. The central painting placed on top of a cupboard has one of two themes, either the *Adoration of the Magi* (six times) or the *Virgin and Child with Saint Anne and Saint John* (five times). A small portrait of a man, dressed in black and holding a glove in his hand, is placed partly in front of the large centerpiece.

On either side of the cabinet a fixed number of paintings can be found, sometimes differently arranged, depicting a variety of landscapes and a seascape. The same painting of *Lot and his Daughters* is always placed leaning against the cupboard. It depicts the story about Lot and his family fleeing from Sodom, a city full of sin [see also Fig. 57]. Another remarkable feature of eight of these eleven constcamer paintings is the vista on the right,

which opens up to a scene of iconoclasm. Human figures with the heads of asses or donkeys are shown with torches or clubs, smashing objects of art, culture and knowledge, such as statues, a lute, an armillary sphere, books, a globe and Mercury's staff. This reference to the Iconoclastic Fury of 1566 (see below and chapter 7) contrasts with the two art lovers, inspecting a painting, depicted in the left foreground.

A third person, standing right behind the two art lovers, looks out at the beholder. It has been suggested that this is a portrait of a painter, since it shows similarities with the *Portrait of a Painter* represented on the wall in three other constcamers by the Francken family [Cat. Nos. 41, 112, and 97].<sup>966</sup> The three men are included in all eleven variations, some of which are signed [Cat. Nos. 29, 46, 58, 114]. From such signatures it becomes clear that Frans Francken II invented the type, and that he was possibly only involved in the execution of three of them [Cat. Nos. 29, 46, 114].

Of the three signed variants, only the *Art Lovers in an Art Gallery* [Cat. No. 114] is dated, with the year 1636. This painting differs the most from the others, which suggests that perhaps Frans Francken III, rather than Frans Francken II, was its creator. Both generations are known to use "d.j." or "den jon" for "the younger" to sometimes sign their creations, in order to distinguish themselves from their eponymous fathers [compare Cat. Nos. 103 and 114].<sup>967</sup> As a result, there is still much uncertainty regarding the attributions of works made by the Francken family and their workshop.

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<sup>966</sup> de Vries, "The Hand of the Artist," 90–92.

<sup>967</sup> Frans Francken II would later switch to "d.o." or "dou" for "the elder." Härting, *Studien zur Kabinettbildmalerei*, 55; Härting, *Frans Francken der Jüngere*, 28–31; Scarpa Sonino, *Cabinet d'Amateur*, 49. The reason for this unusually high number of copies or variants associated with the Francken workshop remains an open question.

## Creators and collaborators

In the seventeenth century, it was not yet customary that artists signed their creations. The aforementioned *Five Senses* series serves as an example. Of these five paintings, only three were signed. They bear the signature of Brueghel I, but not his collaborator Rubens. As a result, it is often not known who created a certain artwork, and attributions are based predominantly on stylistic analysis. This makes the identification of a potential maker, or multiple makers, a matter of connoisseurship. Even when a work is signed, as in the case of the *Five Senses* series, this does not exclude the possibility of a collaboration.<sup>968</sup> That collaborations occurred frequently and successfully, within one workshop and beyond, is well established (see chapter 7 and 9).

Only in a few exceptional cases documentation has survived on the creation of a constcamer painting. This is the case for three, now lost, collective constcamer paintings – the one created under the direction of Gonzales Coques for Jan van Bavegom between 1674 and 1683, and the pendants *Sight and Smell* and *Taste, Hearing and Touch*, which are known only from copies (see above).<sup>969</sup> Moreover, one of those copies [Cat. No. 16] is considered to be a copy that was created collaboratively.<sup>970</sup> The collective approach was first orchestrated by Brueghel I (ca. 1615-1618) and is also at the basis of:

- the *Art Cabinet with “Candaules and Gyges”* [Cat. No. 10],
- *A Cabinet of Pictures* [Cat. No. 11],
- the *Interior with Figures in a Picture Gallery* [Cat. No. 12],
- the *Picture Gallery in the Former Palais Granvelle in Brussels with a Portrait of Pierre-Ferdinand Roose* [Cat. No. 47], and
- the *Palace Interior with Personifications of the Arts* [Cat. No. 48].

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<sup>968</sup> Another example is Hans Jordaens III's *Cabinet of Art and Curiosities* [Cat. No. 4], to which Cornelis de Baellieur, specialized in *staffage*, added the figures.

<sup>969</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 45–47 & 101–2.

<sup>970</sup> Honig, *Painting & the Market*, 195–96.

All of these date from the second half of the seventeenth century, and Wilhelm Schubert van Ehrenberg (1637-ca. 1676) was involved in the creation of four of them [Cat. Nos. 11, 12, 47, 48].<sup>971</sup>

Jacob de Formentrou (1629-after 1695) is the enigmatic painter who was probably responsible for the composition of *Interior with Figures in a Picture Gallery* [Cat. No. 12], of which also a second variant exists [Cat. No. 14]. It is known that the composition of de Formentrou's constcamer painting [Cat. No. 12] was created first, and that subsequently other painters filled the frames with their own miniature paintings over a period of several years (ca. 1654-1659).<sup>972</sup> This type of multi-year prestige project was relatively rare, and such an enterprise was initiated on demand, rather than *on spec*.

In general, the styles and works of art of other artists were imitated by masters or members of one or more workshops. Artists succeeded so well in this, that it is often impossible to determine whether we are looking at imitations or collaborations. Notable examples are the flower pieces included as a bouquet, rather than a picture-within-picture, in several constcamer paintings associated with Frans Francken II [Cat. Nos. 25 and 36]. These floral arrangements (see chapter 9) are so reminiscent of the genre executed to perfection by Jan Brueghel I that one wonders whether or not the artist contributed himself to the composition by invitation.<sup>973</sup>

#### Associated artists

The constcamer catalogue [Appendix A] allows for the creation of an overview of the artists that are associated with constcamer paintings. In total, sixty-six artists are linked to 158 out

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<sup>971</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 100–117.

<sup>972</sup> Van Suchtelen and Van Beneden, 106. Interestingly, his name translates as “true to form.”

<sup>973</sup> Honig, *Jan Brueghel*, 59; van Suchtelen and Van Beneden, *Kamers vol Kunst*, 23 & 100.

of the 161 catalogued paintings either as creator, possible creator (in case of uncertain attribution), or contributor (in case of collective constcamer paintings). The artist who is by far the most associated with constcamer paintings is Frans Francken II: fifty-six times. Most of the artists, thirty-five to be exact, are only mentioned once in relation to a constcamer painting. Even though these attributions can sometimes be quite arbitrary, the list of constcamer artists does inform us about the artistic circles generally associated with constcamer paintings.

Hereafter the names of the artists are mentioned together with the number of constcamer paintings with which their name is associated in parentheses:

- Frans Francken II (56),
- David Teniers II (24),
- Jan van Kessel I (16),
- Jan Brueghel I (14),
- Hieronymus Francken II (10),
- Jan Brueghel II (8),
- Cornelis de Baellieur I (7),
- Erasmus Quellinus II (7),
- Gillis van Tilborgh II (7),
- Gonzales Coques (6),
- Wilhelm Schubert van Ehrenberg (6),
- Willem van Haecht II (6),
- Adriaen van Stalbemt (5),
- Gaspar de Witte (5),
- Hieronymus Janssens (5),
- Peter Paul Rubens (4),
- Abel Grimmer (3),
- Hans Jordaens III (3),
- Theodor Boeyermans (3),
- Antoon Goubau (2),
- Charles Emmanuel Biset (2),
- Ferdinand van Apshoven II (2),
- Frans Francken III (2),
- Hendrik van Balen I (2),
- Jacob de Formentrou (2),

- Jacob Jordaens I (2),
- Jan Cossiers (2),
- Jan Peeters I (2),
- Kaspar Jacob van Opstal II (2),
- Peeter Neeffs II (2),
- Pieter Boel (2),
- Abraham Willemsen (1),
- Ambrosius Francken II (1),
- Cornelis de Heem (1),
- Cornelis de Vos (1),
- Frans Francken I (1),
- Frans Wouters (1),
- Hendrick Andriessen (1),
- Hendrick van Steenwijck II (1),
- Hendrik Staben (1),
- Hendrik van Minderhout (1),
- Hieronymus Francken III (1),
- Jan Boots (1),
- Jan Davidsz. de Heem (1),
- Jan de Duyts (1),
- Jan Pauwel Gillemans II (1),
- Jan van den Hecke I (1),
- Jan van Kessel II (1),
- Jan Wildens (1),
- Johannes Ykens (1),
- Joos de Momper II (1),
- Joris van Son (1),
- Louis de Caullery (1),
- Nicolaas van Eyck (1),
- Peeter Bout (1),
- Peeter Gysels (1),
- Peeter Neeffs I (1),
- Philips Augustyn Immenraet (1),
- Philips Vingboons (1),
- Pierre van Bredael (1),
- Pieter de Witte II (1),
- Pieter Spierinckx (1),
- Pieter Thys (1),
- Pieter van Bloemen (1),
- Thomas van Apshoven (1),

- Victor Wolfvoet (1).

When these numbers are added up, the total is 254. This is because there is often more than one artist associated with 158 of the constcamer paintings – because of uncertainty of attribution and because of collaborations. Three constcamer paintings remain unattributed in the catalogue [Cat. Nos. 76, 99, and 144].

The first six names demonstrate family ties that have been touched on before. The brothers Hieronymus Francken II and Frans Francken II, mainly active in the first decades of the seventeenth century, up to 1623 and 1642 respectively, are part of the Francken family [Fig. 263]. The Breughel family is represented by three generations, starting with Jan Brueghel I, followed by Jan Brueghel II and David Teniers II, and finally Jan van Kessel I [Fig. 273]. Together they were active for most of the seventeenth century, until about 1680. Collaborations between the two families are documented as well [e.g. Cat. Nos. 16 and 49].

#### Signatures and dates

Sixty-one of the 161 catalogued constcamer paintings [Appendix A] have been signed or dated, or both. Although these signatures do not necessarily tell the whole story, as noted at the beginning of this section, they can give some certainty about attributions and chronology. Sometimes the signature is accompanied by “*inventor*” or “*inv*” to indicate who invented the composition [e.g. Cat. No. 21], but not necessarily to reveal who made the constcamer painting, sometimes denoted by “*fecit*” or “*p*” [e.g. Cat. No. 101].<sup>974</sup> Fifty-eight of the 161 paintings in the constcamer catalogue are signed.<sup>975</sup> This number does not include

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<sup>974</sup> Concerning Frans Francken II, who followed in the footsteps of Frans Francken I and his teacher Frans Floris I (chapter 7), see also Härting, *Studien Zur Kabinettbildmalerei*, 56–58.

<sup>975</sup> Cat. Nos. 1, 2, 3, 9, 10, 11, 12, 13, 17, 18, 20, 21, 23, 25, 26, 29, 31, 34, 35, 36, 37, 39, 41, 43, 46, 47, 48, 52, 58, 61, 63, 66, 67, 69, 74, 77, 78, 83, 84, 87, 88, 92, 94, 96, 98, 101, 103, 109, 114, 115, 120, 121, 122, 132, 136, 138, 139, and 158.

some of the signatures that can be found on a picture-within-picture, for example in the *Portrait of Frans Francken I* [Cat. No. 19], which depicts the painter at the age of fifty-five (i.e. 1597). In this case, the signature does not correspond to the painting as a whole, but rather to the individual representation.<sup>976</sup>

Thirty-five of the 161 paintings in the constcamer catalogue are dated.<sup>977</sup> According to these dates, twenty-one of the thirty-five were created before or in 1650, whereas fourteen constcamer paintings were created after 1650. Again, this number excludes some of the dates that can be found on a picture-within-picture, for example in the *Portrait of Father Jan Neyen* [Cat. No. 123], which depicts the painter at the age of thirty-seven (see chapter 9). Since Rubens created the portrait in 1617, which is also inscribed in the picture-within-picture, this acts as a *terminus post quem* for the constcamer painting, rather than the year it was made. The collectively created *Interior with Figures in a Picture Gallery* [Cat. No. 12], on the other hand, bears a number of different dates that indicate that contributions to this constcamer were made at least in 1667, 1671, and subsequently in 1706, decades after the initial completion.<sup>978</sup>

#### Chronological developments

Based on these dates it would seem possible to establish a chronology in the development of the constcamer genre. On closer inspection, however, it becomes clear that there is no linear progression and that compositions and their creators play a more prominent role than dating. Jan Brueghel II and Jan van Kessel I, for example, perpetuated family traditions in the

<sup>976</sup> <https://rkd.nl/explore/images/20817> (accessed January 11, 2021).

<sup>977</sup> Cat. Nos. 1, 9, 10, 11, 12, 13, 17, 20, 21, 25, 31, 35, 39, 47, 48, 61, 62, 67, 69, 76, 87, 88, 96, 103, 109, 110, 114, 115, 120, 122, 132, 136, 138, 139, and 158.

<sup>978</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 113 & 136–37.

form of popular compositions and themes, such as the allegories of sight discussed above. The contents of those pictures of collections remained largely unchanged throughout their long careers. Van Kessel I did expand his architectural repertoire in the 1670s [Cat. Nos. 87 and 88]. Furthermore, an artist such as Wilhelm Schubert van Ehrenberg specialized in the painting of baroque architecture, and this style is reflected in a collective constcamer painting signed and dated by him in 1666 [Cat. No. 47].

It has been suggested that new standards of collecting emerged around 1650, replacing an encyclopedic ideal with more specialized collections, solely containing paintings for example.<sup>979</sup> This kind of development cannot be discerned within the constcamer catalogue [Appendix A]. The idea seems to be largely based on the paintings by David Teniers II who pictured Leopold Wilhelm's collection from 1651 onwards.<sup>980</sup> The pictures of collections by Teniers II indeed focus on, but never exclusively display, paintings. In the second half of the seventeenth century, more elaborate constcamer paintings continued to be made [e.g. the pendants Cat. Nos. 93 and 94].

No phases as proposed by Filipczak could be identified based on the dated examples in the constcamer catalogue (see chapter 2). However, it is interesting to note that the Antwerp Academy, also known as the Royal Academy of Fine Arts, was founded by the Guild of Saint Luke around 1663, led by David Teniers II.<sup>981</sup> Two collective constcamer paintings [Cat. Nos. 10 and 48] might have been intended for the *Schilderskamer* or Painter's Hall, which was part of the Antwerp Academy, located on the second floor of the New Bourse.<sup>982</sup> In both paintings, the coat of arms of the Guild of Saint Luke can be found.<sup>983</sup>

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<sup>979</sup> Filipczak, *Picturing Art in Antwerp*, 5; Honig, *Painting & the Market*, 205.

<sup>980</sup> Marr, "The Flemish 'Pictures of Collections' Genre," 7.

<sup>981</sup> Filipczak, *Picturing Art in Antwerp*, 51; Díaz Padrón and Royo-Villanova, *David Teniers*, 263.

<sup>982</sup> De Paepe, "Painting, Drama and Discomfort," 247–49. The New Bourse burnt down in 1858.

<sup>983</sup> Van Suchtelen and Van Beneden, *Kamers vol Kunst*, 109 & 115.

### Typological distinctions

An attempt was made to categorize the constcamer paintings that are part of the catalogue [Appendix A] based on their compositional characteristics. To that end, certain themes were identified and attributed to the artworks. The various themes are the “studio of the artist,” in which we see an artist at work behind an easel; a “collection on display” that showcases objects in a room without an apparent additional subject; the “collector in his cabinet,” when a sitter is portrayed amidst the collection; “visiting the art dealer” in the case that visitors wander around the space or are offered to view certain works of art; the “collective painting” in which multiple artists contributed their own compositions in a single painting; and the “allegorical representation,” which includes personifications such as those of the five senses and *Pictura*, and mythological stories such as Apelles painting Campaspe, or Achilles discovered among the daughters of Lycomedes.

Sometimes these themes overlap, but generally just one of these was linked to each of the constcamer paintings. This approach, which is by no means conclusive, did not actually contribute to a better understanding of the variations in composition represented in constcamer catalogue. Often a constcamer does not exist as a one-off, but rather several variants were created based on a certain model (see above). The practices of copying that were ubiquitous in Antwerp – including translation, imitation, and emulation – encouraged a method of production in which it was not frowned upon to make multiple versions after a design by a master, either in his own workshop or by his descendants and other followers (see chapter 7). Here too, creators and their mutual relationships play the most prominent role.

When specific compositions are taken into account, the various smaller and larger series and variants discussed above quickly emerge. In addition, it was possible to identify a small set of constcamer paintings that differ from the rest and are closely related to the Francken family's workshop. Härting termed these paintings *Preziosenwände* or encyclopedic still lifes, in which a tabletop and wall are adorned with collector's items.<sup>984</sup> To the right, this extremely shallow space opens to an adjacent room or scene [Cat. Nos. 13, 18, 19, 20, 21, 23, 65, 76, 103, and 115]. A crossover between this set and the rest of the constcamer paintings in the catalogue [Appendix A] seems to be the *Interior of an Art Collection* [Cat. No. 102], about which little else is known.

## Observations and correlations

If we look not at the entire picture, but at the individual elements or entities that constitute the constcamer paintings, similarities can also be detected. This is not unique to the genre though. For example, in van Kessel I and Quellinus II's *The Four Parts of the World: Africa* [Cat. No. 150] of around 1665 a statuette of gold and silver representing *Diana on a Deer* can be seen amid ceramic ware and metalware. The same statuette features prominently in the *Allegory of the Vanities of the World* (1663) [Fig. 210] by Pieter Boel, an artist who by then had already contributed to a constcamer painting [Cat. No. 11].<sup>985</sup> The exemplary statuette serves to illustrate the high degree of exchange within the Antwerp art scene. In this section,

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<sup>984</sup> Härting, *Studien Zur Kabinettbildmalerei*, 143–49; Härting, *Frans Francken der Jüngere*, 83–84; Härting, “Doctrina et Pietas,” 125–28.

<sup>985</sup> Figure 210 is thought to have been created in Paris, but based on the *Diana on a Deer* I think an Antwerp origin is more likely. Boel was active in Antwerp from 1650 and only from 1664 in Paris. He is known to have painted *staffage* in pictures by Quellinus II. See <https://rkd.nl/explore/artists/9645> (accessed June 11, 2021).

similar observations will be discussed and a selection of significant recurring subjects and objects within the constcamer genre will be traced.

### Rubens' pantheon

One of the shining examples to emulate for Antwerp artists was Peter Paul Rubens, *pictor doctus* and a collector himself (see chapter 7). Rubens collaborated with Brueghel I on the *Five Senses* series, but otherwise did not contribute directly to the genre. Indirectly, he is well represented – about thirty of his creations are included in various constcamer paintings. Not only his paintings feature in the constcamer catalogue, but also the room in which Rubens displayed his collection of antique sculpture. This semi-circular sculpture gallery or rotunda was based on the Pantheon in Rome and, like its model, had an oculus in the center of the dome to illuminate the space below.<sup>986</sup>

In addition to written sources, Rubens' pantheon is visually handed down to us through images such as the constcamer painting *Apelles Painting Campaspe* (ca. 1628) [Cat. No. 8] and the engraving *Views of the Rubens House in Antwerp* (1692) [bottom left corner of Fig. 109].<sup>987</sup> These two images were created independently, and their similarities point to their inherent documentary value. A curved wall divided into nine bays can be seen, equipped with niches in which Rubens placed ancient statues and busts. The engraving [Fig. 109] shows the rotunda about fifty years after Rubens' death. By then, the new owner of the house had converted the semi-circular space into a chapel and used the niches to display his collection of sacred relics.<sup>988</sup>

<sup>986</sup> Belkin and Healy, *A House of Art*, 12; Muller, *Rubens*, 38–40.

<sup>987</sup> Belkin and Healy, *A House of Art*, 47. The layout might also have been inspired by the rotunda of Mantegna's house in Mantua, see Briels, "Amator Pictoriae Artis," 148.

<sup>988</sup> Koeleman, "Studying the Studio," 648.

Several Antwerp masters adopted this type of semi-circular room with sculptural decorations in constcamer paintings [Appendix D.3]. Some of these depictions are rather free interpretations of the semi-circular room, instead of an accurate representation, and can thus be seen as idealized versions of Rubens' sculpture gallery. In addition to *The Studio of Rubens* [Cat. No. 5],<sup>989</sup> four more rotundas that refer to Rubens' pantheon can be found in the constcamer catalogue [Cat. Nos. 20, 104, 121, and 133]. These were presumably created by Frans Francken II, Hendrik Staben, and Frans Wouters. Lastly, Jan van Kessel I included a similar motif in his *The Four Parts of the World: Asia* [Cat. No. 148].

#### Hermathena statues

In his theoretical notebook, Rubens made note of Cicero's remarks on the Hermathena as a statue worthy of being placed in ancient *gymnasi* (see chapter 5).<sup>990</sup> In the garden of his house, Rubens similarly combined two statues of Athena and Hermes as an emblem of learning [see also Fig. 235].<sup>991</sup> In the *Emblemata Horatiana* of 1607, his teacher Otto van Veen already explained that Athena, the goddess of Wisdom, and Mercury, the god of Eloquence, show the wicked person the right way of virtue in the emblem *Disciplinae Animus Attentus* [Fig. 289] or "Education restrains the soul."<sup>992</sup> Hoefnagel's Hermathena's [Figs. 130 and 254] had likewise stressed that training is an ornament in prosperity and a refuge in adversity, and that "art has no enemy except the ignorant."<sup>993</sup>

The pairing of statues of the two gods can also be found in five constcamer paintings [Cat. Nos. 28, 40, 49, 53, and 87]. The representation of just Athena or Minerva, however, is

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<sup>989</sup> Koeleman, 649.

<sup>990</sup> Bertram, "Elevating Optics," 232–33.

<sup>991</sup> Muller, *Rubens*, 40.

<sup>992</sup> Bertram, "Elevating Optics," 231.

<sup>993</sup> Zenkert, "The Owl and the Birds," 568.

more common. A statue of the goddess of Wisdom can be found in nineteen constcamer paintings [Appendix D.8].<sup>994</sup> In the earliest dated of these, *Jesus in the House of Martha and Mary* of 1614 [Cat. No. 139], her statue is surrounded by paintings of biblical histories. Athena's presence in these constcamer paintings can be explained by means of the late sixteenth-century definition of a *constliefhebber* (see chapter 7) as a *cultor Minervae* or lover of wisdom – a *philosophos* (see chapter 4).<sup>995</sup>

In the picture-within-picture *Allegory of Ignorance* [Cat. Nos. 28, 49, 53, and 116] the statue of Minerva looks on while donkey-headed people vandalize a constcamer. The message is clear: wisdom can overpower its opposite, ignorance or *agnoieo* (see chapter 4), which is the enemy of the arts [Fig. 254]. This theme is illustrated once more in the same constcamer paintings (except for Cat. No. 116) by means of the centrally placed *Minerva Threatening Ignorance with her Spear, while the Arts are Helped by the Winged Fame*. In this picture-within-picture, Ignorance is recognizable by his donkey ears.

### Iconoclastic donkeys

Several constcamer paintings contain overt references to the local outbreaks of iconoclasm, namely the Iconoclastic Fury of 1566 and the Silent Iconoclasm of 1581 (see chapter 7). Speth-Holterhoff described the iconoclastic scenes featuring ass- or donkey-headed people as *ânes iconoclastes* (French for iconoclastic donkeys), and this designation remained in use by Härting, for example.<sup>996</sup> As a result, the titles of some constcamer paintings still refer to such scenes in French [Cat. Nos. 46, 59, 60, 115, 119, 130, 155, and 156]. According to Speth-

<sup>994</sup> Cat. Nos. 1, 7, 9, 16, 28, 31, 33, 40, 49, 53, 68, 73, 87, 96, 100, 105, 110, 117, and 139.

<sup>995</sup> Filipczak, *Picturing Art in Antwerp*, 69–70; Marr, "Ingenuity and Discernment," 112.

<sup>996</sup> Speth-Holterhoff, *Les Peintres Flamands*, 68, 70, 72, 95 & 130; Härting, *Studien Zur Kabinettbildmalerei*, 150–53 & 157.

Holterhoff, the imagery of *ânes iconoclastes* was an invention of Frans Francken II.<sup>997</sup> Ten unique scenes with iconoclastic donkeys can be found in twenty-two of the catalogued constcamer paintings [Appendix D.14].<sup>998</sup>

Most peculiar are two of the smallest constcamers painted on copper. One of them is attributed to Frans Francken I [Cat. No. 130], the other to his son Frans Francken II [Cat. No. 108]. These stand out because the iconoclastic donkeys are represented in the same space as the collection, destroying parts of it. This occurs only once more within the constcamer catalogue, this time in the adjacent rather than the main room, in the *Collection of Cornelis van der Geest with Paracelsus* [Cat. No. 15]. Alternatively the scene is displayed as a painting within a constcamer painting, the *Allegory of Ignorance* mentioned above [Cat. Nos. 28, 49, 53, and 116]. The ass-headed iconoclasts, accompanied by owl-headed people, are shown in a constcamer destroying objects of art and science, including a *Saint Jerome in his Study*.

By far the majority of the scenes occupy the middle ground between a picture-within-picture and a vista [Appendix D.14]. In these cases, the foreground as a space for scholarly contemplation is contrasted with the picture-within-picture or vista of ignorant destruction. For example, the *Interior of a "Kunst- und Wunderkammer" with the So-Called "Anes Iconoclastes"* [Cat. No. 115] shows a *Preziosenwand* with a painting of *Solomon's Idolatry* in the center. The wise King Solomon, leading exemplar for the collector (see chapter 5), was thought to possess the "wisdom of God" and is shown worshipping an idol.<sup>999</sup> According to this painting, unique in iconography within the constcamer catalogue, even the wisest of men can succumb to idolatry (think of the "*Idololatrae Stupiditas*" in the *Mikrokosmos*, chapter 7). However, idolatry is preferred over iconoclasm and does not

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<sup>997</sup> Speth-Holterhoff, *Les Peintres Flamands*, 68.

<sup>998</sup> Cat. Nos. 13, 15, 21, 28, 29, 41, 46, 49, 53, 58, 59, 60, 73, 108, 112, 113, 115, 116, 119, 130, 155, and 156.

<sup>999</sup> See also <https://www.artic.edu/artworks/106574/solomon-s-idolatry> (accessed January 14, 2021).

warrant the destruction of idols and objects of visual and material culture, as represented in the vista on the right.

It seems significant that the constcamer paintings with iconoclastic donkeys that are part of the Francken workshop variants (see above) represent either the *Adoration of the Magi* or the *Virgin and Child with Saint Anne and Saint John* in the center of the composition.<sup>1000</sup> These are also scenes of worship or adoration, similar to *Solomon's Idolatry*, but in these instances the “right” deity is worshipped and not a “false” pagan god. Furthermore, the painting of *Saint Augustine Trying to Comprehend the Idea of the Trinity* in the center of the composition of *The Cabinet of a Collector* [Cat. No. 21, also on view in Cat. No. 115] prompts reflection on Catholic dogma. As Rijks pointed out, “Christ and God the Father are one in the Trinity, which is indivisible, so earthly form and spiritual form are inseparable [...] this conviction was a strong argument against the violent acts of iconoclasts who had wrongly claimed that material practices had contaminated religious contemplation.”<sup>1001</sup>

A last iconoclastic scene is represented as a mural in *The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73], above the vista of a garden with obelisk. In the center of this scene, a donkey-headed figure tears the pages out of a book. To the left, another figure who rests one foot on a globe is about to smash a lute. In between the two, a third figure stands on top of a table and removes a painting from the wall behind it. The violence of the angry mob speaks volumes and is far removed from the highly sophisticated constcamer that surrounds this mural.

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<sup>1000</sup> The scene with *Iconoclastic Donkeys* in the Francken workshop variants usually includes a caduceus (the staff of Hermes or Mercury), a globe, an armillary sphere, dividers, a lute, books, sculpture, and a seashell [e.g. Cat. Nos. 29 and 59].

<sup>1001</sup> Rijks, “Defenders of the Image,” 66–67.

The earliest dated variant of a scene with iconoclastic donkeys in the constcamer catalogue is from 1617 [Cat. No. 21]. That does not mean that this functions as a *terminus post quem*. For example, Härting has suggested that the *Gallery Interior with Rembert Dodoens* [Cat. No. 155] was created earlier, perhaps between 1605 and 1610.<sup>1002</sup> But where could Frans Francken II, or perhaps his father, have gotten his inspiration? Sources such as Ripa's *Iconologia* and subsequently *Het Schilder-Boeck* by van Mander in the vernacular seem to be indispensable. According to Ripa (1603), a special kind of ignorance, namely "*Ignoranza di tutte le cose*" or ignorance of all things, was represented by the ancient Egyptians as a figure with the head of a donkey, looking down at the earth because the eyes of the ignorant never rise to the sun of virtue.<sup>1003</sup>

In *Het Schilder-Boeck* (1604), the following passage can be found. "*Den Mensch uytghebeeldt met een Esels hooft, beteyckent onverstandt: want den Esel is seer onverstandigh, en vergheetlijck. Den Esel beteyckent oock luyheyt. Hy wort vergheleken den ondersten Molen-steen, die altijd stille light. Met den Esel wort oock beteyckent gheduerighen slaefschien dienst.*"<sup>1004</sup> In other words, a person with the head of a donkey refers to folly or ignorance. The ass is unwise or imprudent and forgetful or oblivious, as well as lazy and slothful in slavish service. Actual donkeys, instead of donkey-headed people, feature in an engraving created in Cologne in 1612 entitled *Der Eselen Kunstkamer* [Fig. 271].<sup>1005</sup> The print demonstrates how the laudable liberal arts are held in contempt by ignorant buffoons in the form of asses trampling a constcamer.

<sup>1002</sup> Härting, "Doctrina et Pietas," 99.

<sup>1003</sup> "*una imagine col capo dell'asino, che guardasse la terra, perche al sole della virtù non s'alza mai l'occhio de gl'ignoranti,*" in Ripa, *Iconologia*, 222. Ripa refers to Plin. Nat. 11.35

<sup>1004</sup> "*Den Esel*" in van Mander, *Het Schilder-Boeck*, part 6, book 2, fols. 129v–130r. See Filipczak, *Picturing Art in Antwerp*, 68.

<sup>1005</sup> Rijks, "Defenders of the Image," 75 (note 23).

The donkey has already been discussed in relation to Apuleius' *Metamorphoses* also known as *The Golden Ass* (see chapters 4 and 7). Van Haecht Goijtsenhoven's emblem of *Apulæus Transformatur in Asinum* [Fig. 173] shows both the transformation of Lucius in an ass in the foreground, as well as the fully transformed donkey worshipping an idol in the background. In this context the donkey is also characterized as lacking prudence, as opposed to those who love knowledge and wisdom. The theme of ignorance, embodied by the donkey-headed iconoclast, is also at the root of an *Allegory of Iconoclasm* [Fig. 272] in the style of Frans Francken II. It is plausible to assume that these iconoclastic donkeys personify Ripa's ignorance of all things.

#### *Brandekens* or fires

The iconoclastic mobs shown in the background of some of the scenes with iconoclastic donkeys seem to resemble the angry mob with torches that enters the room in *The Wedding is Going to Dance* [Fig. 57] by Frans Francken I. The elegant company is contrasted with the angry mob on the one hand, and a scene of fire and destruction as a picture-within-picture on the other. In this case, the painting atop the cabinet depicts *Lot and his Daughters*, a popular theme of the Francken family workshop (see above). The framed painting refers to sin and divine retribution that destroyed the cities of Sodom and Gomorrah. In constcamer paintings a remarkably high number of paintings (about forty-six) representing *brandekens*, burning cities or landscapes, can be found.<sup>1006</sup>

*Brandekens* are accompanied by a range of associations. One example is *Lot and His Daughters Guided by Angels, the Destruction of Sodom and Gomorrah Beyond* by Gillis

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<sup>1006</sup> The designation *brandekens* is common in van Mander's *Het Schilder-Boeck* and in contemporary inventories, see for example Duverger, *Antwerpse Kunstinventarissen: 1*, 19.

Mostaert I represented in *The Picture Gallery of Cornelis van der Geest* [Cat. No. 9], as recently identified by Marr.<sup>1007</sup> In addition, Mostaert I is associated with two other pictures of conflagrations depicted in several constcamer paintings [e.g. Cat. Nos. 13 and 101]. Due to the small scale of the reproductions in constcamer paintings it is not always possible to distinguish what kind of theme the *brandeken* might refer to.

Besides Lot and his Daughters, fiery scenes can also refer to the Burning of Troy, with Aeneas, his father (Anchises) and his son (Ascanius) fleeing the city [e.g. the *Burning City* in Cat. No. 8]. It is known that Frans Francken I, for example, owned a *brandeken* representing Troy in oil on panel, made after “Breugel.”<sup>1008</sup> According to van Mander, a painter like Gillis Coignet I (1542-1599), son of Gillis the Elder and brother of Michiel I, could wipe out Troy and burn the Hades through his crafty manipulation of paint.<sup>1009</sup> Depictions of fires could thus also refer to the underworld or hell, the “habitats of the damned.”<sup>1010</sup>

Another possibility is that such a scene could be a reference to the Iron Age [Fig. 108]. The idea of the Four Ages can be traced back to classical writers such as Ovid, who described them in his first book of the *Metamorphoses*. The first age of humankind is known as the Golden Age [Fig. 105], in which men lived happily as in an Eternal Spring, under the reign of Saturn. The Silver Age [Fig. 106] is marked by the reign of Jupiter, who introduced the four seasons instead of the everlasting spring, and in this age people started cultivating the land. The Bronze Age that followed [Fig. 107] is characterized by building activities, and was a period in which cruelty emerged, but not impiety. Lastly, the Iron Age [Fig. 108]

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<sup>1007</sup> Marr, “Ingenuity and Discernment,” 125. Elise Boutsen came to the same conclusion in Boutsen, “The Connoisseurs’ Tribune,” 4.

<sup>1008</sup> “Een Brandeken van Troyen naer Breugel op paneel olieverve in lyste,” as listed in Duverger, *Antwerpse Kunstinventarissen: 1*, 390.

<sup>1009</sup> Van Mander, *Het Schilder-Boeck*, part 1, chapter 7, fol. 32v; Göttler, “Wit in Painting,” 237 (note 19).

<sup>1010</sup> Prosperetti, *Landscape and Philosophy*, 69.

brought forth great evil. Faith and truth took flight, while war and rapacity stained the face of the earth.<sup>1011</sup>

In a Christianized version of the ages of humankind we know of three, based on a series of prints by Antwerp artist Marten de Vos, in collaboration with poet Willem van Haecht I. The first age is that of the Law of Nature [Fig. 102], with Adam and Eve in the Garden of Eden behind the figure of Nature. In her right hand, Nature holds a heart that is inscribed with “Do good, avoid disaster.” On the band running over her chest we see an alpha and an omega, first and last letter of the Greek alphabet, referring to both Christ and God. The second age [Fig. 103] is governed by the Law of the Old Testament, which Moses receives on the left, while the wrath of god is shown on the right. The personification of the Old Testament holds the tablets with the Ten Commandments in the one hand, and the sword of justice in the other. The third age is that of the Law of Grace and the New Testament [Fig. 104]. We see Christ as the source of life, and the figure of Grace with a book on her lap. It reads “*agnus occisus*” referring to the “killed lamb” or Christ, who died for the sins of humankind. The *brandekens* are thus most reminiscent of the second age [Fig. 103], which carries the message that a fear of god will lead to virtue and wisdom.

Additionally, fire is one of the four elements [Figs. 152 and 175], and because of the pain that its heat causes, fire is also associated with the sense of touch [Fig. 100]. A number of these associations are captured in the *Allegory of Patience during the Period of War*, which is based on a print invented by Marten de Vos, centrally included in the constcamer painting *Gallery of Art Objects* [Cat. No. 6].<sup>1012</sup> The print from around 1577 functioned as a political allegory on what is in retrospect referred to as the Dutch Revolt (1566-1609).<sup>1013</sup>

<sup>1011</sup> Ovid, *Metamorphoses*, 1.89-1.162.

<sup>1012</sup> Samouelian, “Hercule et Bacchus dans un Cabinet d’Amateurs,” 77.

<sup>1013</sup> See <http://hdl.handle.net/10934/RM0001.COLLECT.367853> (accessed January 15, 2021).

The events associated with the confessional wars in Antwerp up to 1577 are the Furies discussed in chapter 7. In the picture-within-picture, the personification of patience is presented as the only ally at a time of war, characterized by fire and murder. It is striking that in the same constcamer painting, next to this allegory, a *Burning City* is on display.<sup>1014</sup>

At the same time, however, representing fire was complex and required skilled artistry and imagination.<sup>1015</sup> As Pliny had already remarked, some things, such as thunder, lightning, and thunderbolts, “in reality do not admit of being portrayed” [e.g. Fig. 195].<sup>1016</sup> By 1604, van Mander, who had left Flanders for religious reasons, mentioned the depiction of *branden* and other genres as second best only to the painting of histories in the introduction to *Het Schilder-Boeck*.<sup>1017</sup> The *const* of representing fires is also discussed as part of the art of reflection, and fires by night were considered by van Mander to be particularly terrifying.<sup>1018</sup> As a result, *brandekens* seem to have inspired a sense of awe and wonder at both the force of nature and the violence of men, as well as the artist's ability to capture it.

### Mimetic monkeys

Imagination and the imitation of nature are central to the artifice (*poiesis/techne*) of the artist (see chapter 4). The ability to visualize something mentally (i.e. without matter) and then transform it into a material reality involved ingenuity. The personification of Imitation, as described and illustrated by Ripa [Fig. 259], has several attributes: brushes, a mask, and a

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<sup>1014</sup> Equally striking is the *God the Father with Tiara and the Holy Spirit*, which is the only known depiction of God and of the Holy Spirit within the constcamer genre. Above this picture, a *Shepherd with an Animal on his Shoulders* can be seen, which may be interpreted as Christ the Son, so together these pictures-within-pictures could represent the Holy Trinity.

<sup>1015</sup> Göttler, “Wit in Painting,” 218–19.

<sup>1016</sup> Pliny, *The Natural History*, 35.36.

<sup>1017</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*6r.

<sup>1018</sup> Van Mander, part 1, chapter 7, fol. 31v.

monkey (see chapter 5). The monkey as a symbol of imitation especially resonated with the idea of the work of art, and by extension the artist, as “the ape of nature.”<sup>1019</sup> *The Monkey Painter* [Cat. No. 83] is part of a series by David Teniers II depicting monkeys performing human acts. In this constcamer painting, not only the painter but also two spectators (perhaps *liefhebbers*) are represented as imitators in the form of monkeys.

The concept of *ars simia naturae* was taken up by the Paracelsian Robert Fludd (1574-1637) in the first volume of his *Utriusque Cosmi Maioris Scilicet et Minoris Metaphysica, Physica, atque Technica Historia* (Oppenheim: 1617) [Fig. 228].<sup>1020</sup> The first image in this publication [Fig. 46] represents his worldview consisting of God, the macro- and microcosm. In this “mirror of all of nature and an image of art” (*Integrae Naturae Speculum, Artisque Imago*), God is chained to a personification of Nature, who is in turn chained to an ape. The monkey is represented as a *deus geometer*, measuring a globe with dividers.<sup>1021</sup>

In line with Paracelsus’ *signator perfectus* (see chapter 8), Fludd’s universal artist in the guise of an ape conveys the notion that both theoretical and technical knowledge are “derived from the study and imitation of nature” (see chapters 4, 5 and 6).<sup>1022</sup> The tools to study and imitate nature are depicted in more detail in the title page [Fig. 228] of the second treatise within the *Utriusque Cosmi*. Of special interest is the inclusion of a painter, as well as of scientific and musical instruments (to be discussed in chapters 11 and 13).

<sup>1019</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 108–11.

<sup>1020</sup> Cohen, “Ars Simia Naturae,” 219–20.

<sup>1021</sup> Bredekamp, *Antikensehnsucht und Maschinenglauben*, 69.

<sup>1022</sup> Cohen, “Ars Simia Naturae,” 224.

Whether or not this interpretation of the artist as the ape of nature is the one that Teniers II intended to convey can no longer be verified.<sup>1023</sup> The monkey is a rather ambiguous animal, which appears about seventy-seven times in fifty-five constcamer paintings [Appendix D.9]. During the seventeenth century and before, monkeys could have both positive and negative connotations. An early example at Chartres Cathedral, for example, allegorized curiosity as an ape.<sup>1024</sup> Heavily indebted to Saint Augustine, curiosity referred in this context to the realm of animal passions rather than the noble pursuit of knowledge.<sup>1025</sup> In a similar vein, the monkey is the attribute of the sense of Taste [Figs. 70, 99, and 164] as has been discussed above [e.g. Cat. Nos. 136 and 137].

At the same time, monkeys imitating human activities could ridicule foolishness and vanity,<sup>1026</sup> because of the physical similarities between humans and apes.<sup>1027</sup> Furthermore, the monkey signified the human vices, according to van Mander, as well as impudence and pretense.<sup>1028</sup> A number of these interpretations can be discerned within the constcamer genre [Appendix D.9]. On two occasions, a monkey is shown holding a mask in front of its face, referring to vanity and imitation as a form of pretense [Cat. Nos. 98 and 145]. In other cases, the ape is dressed as a fool or court-jester in a yellow and red garment [Cat. Nos. 1, 7, 60, 63, 66, 113, and 156], sometimes surrounded by foodstuffs in the form of fruits.<sup>1029</sup>

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<sup>1023</sup> For the numerous allusions to alchemy in the oeuvre of David Teniers II, see for example Russell Corbett, "Convention and Change," 251–54.

<sup>1024</sup> Wood, "'Curious Pictures'," 337.

<sup>1025</sup> Daston, "Curiosity in Early Modern Science," 393–94.

<sup>1026</sup> See for example Janson, "Titian's Laocoon Caricature."

<sup>1027</sup> Cohen, "Ars Simia Naturae," 218.

<sup>1028</sup> Van Mander, *Het Schilder-Boeck*, part 6, book 2, fol. 128v. "*Den Aep, oft Simme, beteyckent den ondeughenden Mensch. Den Aep beteyckent den geveynsden, dewijle den Aep zijn pisse stracx bedeckt, ghelijck den gheveynsden zijn ondeught. Oock heeft den Aep slechts eenigh schijn van Mensch, en is doch een Beest. Met den Aep wort ooc beteyckent onschamelheyt: want hy zijn onschamel bloot lidt yeder laet sien, en ander onschamel dinghen in yeders aensien doet.*"

<sup>1029</sup> Cohen, "Ars Simia Naturae," 218–20.

Most often, however, the monkey is shown watching. It can be found sitting in front of a painting, inspecting it with or without eyeglasses, or looking out to the viewer. An earlier example can be found in Dürer's *Virgin and Child with the Monkey* [Fig. 290], whose tail points to the artist's monogram.<sup>1030</sup> The monkey in this scene has positive connotations and represents *imitatio sapiens*, or the imitation of things both real and imaginary, in the sense that the latter can only be known by means of the intellect (e.g. the Virgin and Child). The concept of *imitatio sapiens* also resonates with the abovementioned ability of artists to capture *brandekens*, for example.

By contrast, monkeys could have negative connotations and therefore represent *imitatio insapiens*, or a kind of ignorant imitation where only the eye of the body is used, and not the eye of the mind.<sup>1031</sup> This seems to be referred to in the *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84], among others, in which an ape is looking at a painting of *Christ Healing the Blind* through eyeglasses, held upside down. This indicates that the animal does not know how to look. A second ape in this constcamer painting is shown looking at itself in a handheld mirror, imitating Venus and possibly a reference to a lack of self-knowledge.

#### Reflective mirrors

The mirror is of additional significance in relation to *mimesis*. In line with Seneca, van Mander tells us that the mirror mainly indicates self-knowledge.<sup>1032</sup> For example, the attribute of Prudence (*phronesis* or *prudentialia*), one of Aristotle's five forms of true

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<sup>1030</sup> Cohen, 220.

<sup>1031</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 110.

<sup>1032</sup> Packwood, "Socrates Becomes Narcissus," n.p.

knowledge [Fig. 251], is a mirror.<sup>1033</sup> Van Mander continues that traditionally the mirror is also understood as a symbol of falsehood, for it only gives a semblance of reality – the mirror image is not reality itself, because reality appears mirrored in its reflection so that left has become right and vice versa.<sup>1034</sup> Reflections on such themes seem especially fitting for constcamer paintings that revolve around the sense of sight (see chapter 13).

### Bird-of-Paradise

A bird-of-paradise can be found in seven constcamer paintings [Appendix D.4].<sup>1035</sup> Four of those paintings are variants of each other, and as such closely related [Cat. Nos. 28, 49, 53, and 116]. In *The Archdukes Visiting the Collection of Pierre Roose*, for example, the bird-of-paradise can be found on the table in the right foreground amid seashells, a tray for specimens, coral, jewelry and coins or medals. The same is also true, however, for two seemingly unrelated constcamer paintings [Cat. Nos. 6 and 51]. How did the bird-of-paradise end up in these six pictures of collections? And what does it represent?

Birds-of-paradise came from New Guinea in the East Indies and reached Europe via overseas trade routes. The first examples probably arrived in 1522 aboard the fleet of Ferdinand Magellan (ca. 1480-1521), who himself did not survive to complete his expedition, the first circumnavigation of the Earth. His Spanish crew nevertheless brought back about five skins of birds-of-paradise that were presented to Emperor Charles V.<sup>1036</sup> One of those birds is subsequently documented in the collection of Margaret of Austria, who kept it in a

<sup>1033</sup> Ripa, *Iconologia*, 416–18.

<sup>1034</sup> Van Mander, *Het Schilder-Boeck*, part 6, book 2, fol. 133v. “Den Spieghel houden wy veel voor de kennis onses selfs: doch wort hy van outs gehouden voor valscheyt, vertoonende slechts den schijn van t’waer wesen, maer de waerheyt selfs niet: want al wat rechts is, toont hy slincks, en wat slincks is, rechts.”

<sup>1035</sup> Cat. Nos. 6, 28, 49, 51, 53, and 116.

<sup>1036</sup> Lawrence, “Fallen Angels,” n.p.; Lawrence, “Making Monsters,” 97.

small wooden box in her *petit cabinet*.<sup>1037</sup> Due to New Guinean preservation practices, the birds-of-paradise or *manucodiata* (birds of God) did not have feet, which spurred the imagination of European scholars and artists alike.<sup>1038</sup>

An early account of the bird-of-paradise can be found in the third volume *De Avibus* of Gessner's *Historia animalium* (Zurich: 1555).<sup>1039</sup> Interestingly, his scholarly volumes included information of the literary and symbolic use of animals in imagery and metaphors.<sup>1040</sup> Because of its footless nature, Gessner assumed that the bird-of-paradise was in unending, perpetual flight.<sup>1041</sup> By the end of the sixteenth century, birds-of-paradise were still scarce but had become available to collectors such as Aldrovandi and Calzolari [Fig. 6], who also published on the exotic bird.<sup>1042</sup> Besides naturalists, news of the existence of this bird also reached the Antwerp art scene. For example, an illustration of the bird-of-paradise was included in Gessner's *Icones avium* and *Vogelbuch*, which Antwerp artists probably had access to through Rubens' library (see chapter 7).<sup>1043</sup>

The *Paradisaea apoda*, or bird-of-paradise without feet, already featured in van Haecht Goidtsenhoven's *Mikrokosmos, Parvus Mundus* (Antwerp: 1579). The print on page 21 shows *Fortunae Natura* [Fig. 172] or the nature of fortune. The personification of Fortuna is also depicted with wings, but without feet. She balances on a globe and holds a banner

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<sup>1037</sup> Eichberger, *Leben mit Kunst*, 384. "Item, ung oyseau mort, appellé oyseau de paradis, envelopé de taffeta, mis en ung petit coffret de bois."

<sup>1038</sup> Lawrence, "Making Monsters," 98.

<sup>1039</sup> On pages 611 to 614, available via <https://www.biodiversitylibrary.org/item/218216#page/797/mode/1up> (accessed January 20, 2021); <https://doi.org/10.3931/e-rara-8154> (accessed January 25, 2021).

<sup>1040</sup> Kusakawa, "Gessner's History of Nature," 37.

<sup>1041</sup> Lawrence, "Fallen Angels," n.p.

<sup>1042</sup> "De Manucodiatis" (pp. 806–816) in *Vlyssis Aldrovandi [...] Ornithologiae* (Bologna: 1599), see <https://archive.org/details/hin-wel-all-00001977-001/page/n849/mode/2up> (accessed January 20, 2021); "Chamaeleon Aereus" (pp. 668–673) in *Musaeum Franc. Calceolarii jun. Veronensis* (Verona: 1622), see <https://archive.org/stream/MusaeumFranc.Calceolarilun.Veronensis/ceruti-b-musaeum-1622-00022318-LowRes#page/n729/mode/2up> (accessed January 20, 2021).

<sup>1043</sup> On page 20 in the 1555 edition described as "ex Novo orbe" and "Avicula Dei nominatur," available via <https://doi.org/10.3931/e-rara-48089> (accessed January 25, 2021).

that catches the wind. Fortuna looks to her right to the footless bird-of-paradise that seems to float in the air. The accompanying text explains that the bird is named after the Garden of Eden, and in the absence of feet it is always airborne and subject to winds. Similarly, Fortuna is unstable and mobile. She never stays in one place for long and flies swiftly through the air like a bird.<sup>1044</sup>

By the early seventeenth century some skins of birds-of-paradise with feet also found their way to Europe.<sup>1045</sup> One such example is represented alive and well on the left tree trunk in *Air* (1611) by Brueghel I and van Balen I [Fig. 317].<sup>1046</sup> Another example can be found in the lower left corner of *The Garden of Eden with the Fall of Man* (ca. 1615), created by Brueghel I and Rubens [Fig. 194]. Despite the availability of this knowledge, the bird-of-paradise retained its image as something between a mythical and a natural phenomenon, valued for its exotic origins, (relative) novelty, and divine associations.<sup>1047</sup>

In what capacity the bird-of-paradise without discernible feet features in six of the constcamer paintings is difficult to determine. The proximity of seashells and coral at least suggests maritime enterprises. The nearby dagger, though not as exotic as the *kris* [e.g. Cat. No. 21], also appears to be of oriental origin. Lastly, two birds-of-paradise in two other guises occur within the genre. A bird in flight features in *The Four Parts of the World: Asia*

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<sup>1044</sup> <https://archive.org/details/mikrokosmosparvv00haec/page/n55/mode/2up> (accessed January 20, 2021). On page 21: “*Cadent à latere tuo mille, & decem millia à dextris tuis ad te autem non appropinquabit. Psal. 90b.*” On page 22: “*Est volucris nomen paradisi sumit ab horto, / semper agit ventos & fertur in aera pennis / huic etenim Natura pedes inimica negavit. / Sic incerta, levis, vaga, lubrica, mobilis, atque / inconstans Fortuna loco non haeret eodem, / semper & ambigua dubiaque in sede moratur. / Propterea illius Smyrnae posuere Coloni / Truncatis pedibus statuam, quod sistere firmo / se nequeat gressu, medias dixere per auras / instar avis, depicta, celer Fortuna volabis.*”

<sup>1045</sup> Lawrence, “Making Monsters,” 100.

<sup>1046</sup> Brueghel I is thought to be “the first to illustrate this demystification by representing the bird with feet.” According to Rikken and Smith, “Jan Brueghel’s Allegory of Air,” 96.

<sup>1047</sup> Swan, “Exotica on the Move,” 631; Swan, “Birds of Paradise,” 2013, 61. Gessner refers to Aristotle’s account of the bird-of-paradise on page 611 of his *De Avibus*, part three of the *Historia animalium* (Zurich: 1555). Available via <https://doi.org/10.3931/e-rara-8154> (accessed January 25, 2021).

[Cat. No. 148], while a second, stuffed bird-of-paradise adorns a turban in the same constcamer painting. The origin of the bird is clearly at the heart of these depictions.

### Interrelationships

Based on similarities in details, five other constcamer paintings could be associated with each other [Cat. Nos. 2, 4, 40, 67, and 111]. Of those, three have a highly similar spatial structure [Cat. Nos. 2, 4, and 40], while the *Connoisseurs in an Art Collection* [Cat. No. 111] is a copy after an eponymous constcamer painting [Cat. No. 67]. The latter has formerly been associated with the shop of Jan Snellinck, but this interpretation has since been refuted.<sup>1048</sup> In its windows, two monograms and a date can be found: a “W” and “M” intertwined, with an “F” above and “16” underneath, on the left, and the initials “I.F.” with “21” underneath, on the right. Although the intertwined M and W remain unexplained, it is now generally accepted that Hieronymus Francken II created this constcamer painting in 1621. This attribution is strengthened by the inclusion of a fossil shark tooth in the painting, which otherwise features exclusively in *Preziosenwände* associated with the Francken workshop [Appendix D.7].

One of the most remarkable features of *Connoisseurs in an Art Collection* and its derivative [Cat. Nos. 67 and 111] is the inclusion of a constcamer painting as a picture-within-picture. The *Merry Company in Room Hung with Paintings* is placed centrally in the foreground and its dimensions (without frame) are approximately fifteen by twenty-four centimeters. In this interior several paintings decorate the wall, among them a *Judgement of Paris*, a *Portrait of an Emperor*, and a Danaë or reclining Venus. Sculpture adorns the room,

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<sup>1048</sup> Speth-Holterhoff proposed this identification in 1948, which was challenged by Monballieu in 1976. See Peeters, “Venturing into the Interior,” 52.

in which five persons look at the artworks and at each other, play music on a lute, and enjoy a lavish meal, in the presence of a servant. Possibly these figures represent the five senses.<sup>1049</sup>

Several interrelationships could be distinguished between the *Connoisseurs in an Art Collection* [Cat. No. 67] and the *Cognoscenti in a Room Hung with Pictures* [Cat. No. 40]. For example, the cupboards in both are almost identical. In both, the same *Saint Jerome in his Studio* can be found. This picture-within-picture shows some resemblance with van Reyerswaele's *Saint Jerome* [Fig. 16], who depicted the saint as a scholar in his study (see chapter 6). A *Miniature Portrait of a Man* is furthermore represented in both, once being held by a visitor [Cat. No. 67] and once lying on the table with green tablecloth in the left foreground [Cat. No. 40]. Additionally, a *Portrait of a Painter* hangs on the rear wall in both constcamer paintings. Although this portrait has not been identified, there seem to be similarities with engraved portraits of Pieter Bruegel I and Pieter Bruegel II.<sup>1050</sup> Other representations the two have in common are the *Burning City with Bridge* and *Flowers in a Vase*, and the inclusion of an astrolabe and Hood's sector.

The reappearance of certain paintings within several constcamer paintings, of which the originals are no longer known, is a common phenomenon within the constcamer catalogue. Another example is the *Soldier with Sword* that features in the *Allegory of Sight* [Cat. No. 17] as well as in four constcamer paintings created by van Haecht II [Cat. Nos. 8, 9, 15, and 34].<sup>1051</sup> Such recurrences suggest that the creators of constcamer paintings included

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<sup>1049</sup> If correct, then from left to right: the sense of Sight, embraced by Touch, Hearing playing the lute, Smell holding a small bouquet of flowers, Taste about to drink some wine, and the servant pouring another glass.

<sup>1050</sup> See <https://rkd.nl/explore/images/178144>; <https://rkd.nl/explore/images/179890> (both accessed January 21, 2021).

<sup>1051</sup> Did van der Geest buy this *Soldier with Sword* from the Archdukes? Was it part of his collection all along? Or does it merely refer to a certain ruler we no longer recognize? Although probably impossible to ascertain, such observations certainly raise questions.

imitations of existing paintings, prints, and other objects in their creations, rather than completely imaginary elements. This is sometimes also the case for the visitors in the constcamers, which could be based on pre-existing stocks of head studies or portrait paintings (see chapter 7 and 9). Compare for example the figure in black taking measurements on a celestial globe with dividers in *The Geographer and the Naturalist* [Cat. No. 116] with the same figure without globe in the *Gallery of Art Objects* [Cat. No. 6].

Evidence for the use of model books (see chapter 7) full of prints and drawings can be found in numerous constcamer paintings, for example in the five interrelated paintings mentioned at the beginning of this section [Cat. Nos. 2, 4, 40, 67, and 111]. It is furthermore telling that according to the inventory made after the death of Frans Francken I in 1616, he left a “*Constboeck vol principael teeckeningen*” behind, as well as a book of drawings (by his own hand) after Michelangelo, numerous books of prints (of which one was by the “*Jesewiten*” or Jesuits), unbound prints and sketches (by Dürer among others), and other (emblem) books including van Veen’s *Emblemata Horatiana*.<sup>1052</sup> The latter might explain, for example, the inclusion of *Virtus in Actione Consistit* [Fig. 288] in the *Interior of an Art Cabinet where a Man Surrounded by the Seven Deadly Sins is Urged by Mercury and Minerva to observe the Works of Mercy* [Cat. No. 140], to which Francken II possibly contributed.

It is not known who created the *Cognoscenti in a Room Hung with Pictures* [Cat. No. 40]. Because of the similarities with the *Connoisseurs in an Art Collection* [Cat. No. 67], Hieronymus Francken II has been suggested as the possible creator. What remarkable is about both constcamer painting is the attention paid to the representation of scientific instruments (see chapters 8 and 13). By comparison, the astrolabe is depicted with much

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<sup>1052</sup> Speth-Holterhoff, *Les Peintres Flamands*, 62 & 68; Duverger, *Antwerpse Kunstinventarissen: 1*, 389–94; Rijks, “Catalysts of Knowledge,” 115 & passim.

more finesse by the unknown artist [Cat. No. 40]. The only constcamer painting that excels these two in the depiction of scientific instruments is *The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73]. The creator(s) of this masterpiece could not be identified either and remains a subject of debate.<sup>1053</sup> The highly refined touch and sparkling blue paint on a copper support are reminiscent of the *Cognoscenti in a Room Hung with Pictures* [Cat. No. 40], but this does not solve the mystery, especially since Hieronymus Francken II died in 1623, several years before the *terminus post quem* of the Linder Gallery (1627).<sup>1054</sup>

### Inscriptions

Numerous inscriptions can be found in the catalogued constcamer paintings. In *The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73], a number of books are piled up and partially obscured by the celestial globe on the table in the center. The one on top has been identified as Napier's *Mirifici Logarithmorum Canonis Descriptio* (1614).<sup>1055</sup> The two titles underneath are by Kepler and inscribed with "[Ha]rmonices Mundi" (1619) and "Tabula Rudolphine" (1627). Because of this last title, a *terminus post quem* could be established for this constcamer painting.<sup>1056</sup> In addition, some of the books on the shelves (underneath the vaulted corridor on the left) bear inscriptions, such as "Euclid." On a piece of paper in front of the globe, and next to six medals, three diagrams are drawn accompanied by the words "Tholomeus," "Copernicus" and "Aly et Alia Vident" (see chapters 3 and 13). Several other inscriptions have previously gone unnoticed and will be highlighted in this section.

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<sup>1053</sup> As early as 2012 a prize was announced for "the discovery of documentary evidence which leads to the certain attribution of the painter of the Linder Gallery." See <http://mysteriousmasterpiece.com/announcing-the-linder-gallery-prize/> (accessed June 11, 2021). It has not yet been awarded.

<sup>1054</sup> Adriaen van Stalbeem (1580-1662) was added as a possible creator in the constcamer dataset, because of his use of a similar sparkling blue paint in *The Sciences and the Arts* [Cat. No. 53] of around 1650.

<sup>1055</sup> Gorman, Bradburne, and Marr, *A Mysterious Masterpiece*, 132-133.

<sup>1056</sup> Gorman and Marr, "Others See It Yet Otherwise," 87.

### Portraits and books

In *The Sciences and the Arts* [Cat. No. 53] three pictures-within-picture are provided with tiny inscriptions that are barely legible. In the *Portrait of a Man with Black Hat* [Fig. 291] the date “1610” can be read, whereas the *Portrait of a Wife with Pomander* [Fig. 270] includes the date “1611.”<sup>1057</sup> The inscriptions in the *Portrait of a Husband with Skull* [Fig. 269] could not be deciphered. The pendant portraits of husband and wife show some similarity with de Vos’ portrait painting of *Gillis Hooftman (1521-81), Shipowner, and His Wife Margaretha van Nispen* [Fig. 268], but not enough to identify them.<sup>1058</sup> At best, it can be suggested that these portraits represent a local, Antwerp tradition of portraiture.

In *An Antique Dealer's Gallery* [Cat. No. 101] by Frans Francken II three intriguing inscriptions could be found.<sup>1059</sup> The first one is placed on the side of the book that is partly covered by a sketchbook, which shows a study of Andromeda on its right page [Fig. 294]. The inscription reads “*Homerius*,” referring to Homer, the great poet of antiquity. In addition, the cover of the book on the top shelf on the right bears the inscription “*Dante*” [Fig. 295], the great poet of the late thirteenth and early fourteenth centuries. In the *Portrait of a Gentleman* [Fig. 296], on either side of the head, can be read “*An[no] Otavia. Dit[to] Verona.*”<sup>1060</sup> The portrait is furthermore characterized by the skull the gentleman holds in his

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<sup>1057</sup> These observations are based on my visit to the Museo del Prado, Madrid, in February 2019. Similar scribbles can be discerned, but are illegible, in *The Archdukes Visiting the Collection of Pierre Roose* [Cat. No. 49]. This seems to indicate an extremely attentive method of copying.

<sup>1058</sup> On top of that, the dating of 1611 makes no sense in this context.

<sup>1059</sup> These observations are based on my visits to the Galleria Borghese, Rome, in June and August 2019.

<sup>1060</sup> If this reading is correct, the inclusion of “*ditto*” strengthens the emphasis on the relationship between this picture-within-picture and Verona, since the use of this word is first attested in Italy around 1625. <https://en.wiktionary.org/wiki/ditto>; <https://www.merriam-webster.com/dictionary/ditto> (both accessed January 22, 2021).

right hand, and the red Cross of Saint James on top of his black garment, which identifies the sitter as a Knight of the Order of Santiago.

The *Portrait of a Gentleman* [Fig. 296] shows strong similarities with the *Portrait of a Painter with Glove* represented in the constcamer painting *Art Lovers in an Art Gallery* [Cat. No. 114], as well as the other depictions of this portrait in the Francken workshop variations [Cat. Nos. 22, 29, 46, 58, 59, 60, 113, 119, 156, and 161]. This could indicate that Frans Francken II had such a portrait in his possession. So far, it has not been possible to associate the portrait with a specific member of the Order of Santiago.<sup>1061</sup> An associated scallop or Saint James shell, also pilgrim symbol, can be discerned on the middle shelf in the nearby cupboard [Fig. 297].

Noteworthy inscriptions can furthermore be found in *The Four Parts of the World: Africa* [Cat. No. 150]. This constcamer painting includes two statues against the back wall. To the left, we see a figure in classical dress with an opened book in his hands, while his left foot rests on two books. The plinth underneath is inscribed “Aristotelus,” a direct reference to the Greek philosopher who left such a clear mark on the early modern period. To the right the plinth is inscribed with “Plinius,” indicating that this statue is an effigy of the Roman author of the *Naturalis Historia*.<sup>1062</sup> Their inclusion in an allegory of Africa is intriguing.

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<sup>1061</sup> A potential candidate could be Otto von Neidegg. As an associate of Emperor Maximilian II, von Neidegg was one of the non-Spaniards that became a member of the Order of Santiago in 1564. My thanks go to Erika Honisch, who was kind enough to share her insights and unpublished manuscript “On the Trail of a Knight of Santiago: Collecting Music and Mapping Knowledge in Renaissance Europe” with me, which will appear in a forthcoming issue of *Music & Letters*.

<sup>1062</sup> This second inscription was also noted by Baadj, *Jan van Kessel I*, 167.

## Mandrakes

In the *Allegory of Sight (Cabinet of the Naturalist)* [Cat. No. 158] the painting of a *Mandrake and other Naturalia* can be found. The inscription in the lower right corner underneath the two mandrakes reads “*Mandragora Del Na[...]*.” This picture-within-picture is similar to the *Study of Insects and Mandrakes* depicted in *The Four Parts of the World: Europa* [Cat. No. 89]. Not coincidentally, both constcamer paintings were created by Jan van Kessel I in 1664. Two more mandrakes appear in paintings within constcamer paintings, one added by van Kessel I in the collective constcamer *A Cabinet of Pictures* [Cat. No. 11], and the other in the *Personifications of Natura and Pictura in an Art Collection, with Representative Antwerp Canvases* [Cat. No. 95] of huge dimensions (164 by 241 centimeters).

Mandrakes had been part of collections such as those of the Counts of Zimmern at Bösinggen-Herrenzimmern and of Albert V at the *Munich Kunstkammer* (see chapter 6).<sup>1063</sup> Naturalists also included descriptions and illustrations of this plant in their printed collections of the plant world, such as Fuchs in his *De historia stirpium* (Basel: 1542) [Fig. 299] and Dodoens in his *Cruijdt-boeck* (Antwerp: 1554).<sup>1064</sup> The roots of the plants seemed to resemble human figures and this was regarded as a curiosity in the early modern period. Kircher illustrated the mandrake in his *Ars Magna lucis et umbrae* (Rome: 1646) [Fig. 298] to accompany his discussion of “*Naturae pictrici in lapidibus, plantisque miracula.*”<sup>1065</sup> The anthropomorph *mandragora* is shown surrounded by other works of Nature the Painter.<sup>1066</sup>

<sup>1063</sup> Scheicher, “Kunstkammer,” n.p.; Pilaski, “The Munich Kunstkammer,” 132.

<sup>1064</sup> For Fuchs (1542), see pages 529-532 available via <https://cudl.lib.cam.ac.uk/view/PR-SEL-00002-00081/288>; <https://archive.org/details/Dehistoriastirp00Fuch/page/530/mode/2up> (both accessed January 25, 2021). For Dodoens (edition of 1563), see pages 372-374 available via <https://archive.org/details/mobot31753000817624/page/ccclxxii/mode/2up> (accessed January 25, 2021).

<sup>1065</sup> Book 10, part 2, chapter 2, pages 806-807, available via [https://archive.org/details/athanasiikircher00kirc\\_8/page/n919/mode/2up](https://archive.org/details/athanasiikircher00kirc_8/page/n919/mode/2up) (accessed January 25, 2021).

<sup>1066</sup> Findlen, “Jokes of Nature,” 299. The engraving [Fig. 298] includes a *camera obscura* (see chapter 8), in which a painter traces “nature’s painting.”

The idea that a mandrake could be male or female goes back to Dioscorides. He wrote that the male mandragora is white and the female mandragora black.<sup>1067</sup> While the two genders are represented intertwined by van Kessel I, he does not appear to have been familiar with the detail of the two colors. The artist does, however, depict a book next to the *Study of Insects and Mandrakes* in *The Four Parts of the World: Europa* [Cat. No. 89] that is inscribed with “*Plinius*.”<sup>1068</sup> Pliny indeed described the mandrake in his *Naturalis Historia*.<sup>1069</sup>

The mandrake can furthermore be discerned as a plant lying on a table, instead of featuring in a painting, in a number of constcamer paintings [Appendix D.5].<sup>1070</sup> These include the aforementioned variants on the allegory of sight, except for the one by Frans Wouters [Cat. No. 133]. The *mandragora* could also not be discerned in the *Allegory of Fortuna* [Cat. No. 127], another one of the variants. Since the others do depict the anthropomorphic plant, it can be inferred that its invisibility is probably due to the poor image quality. Two more constcamer paintings [Cat. Nos. 98 and 145] depict two intertwined mandrakes, as opposed to a single one, lying on a table.

The first occurrence of the mandrake within the constcamer catalogue appears to date from 1631, the year in which Jan Brueghel II signed *The Vanity of Human Life* [Cat. No. 98]. Members of the Brueghel family thus seem to have had access to illustrations of, or actual, specimens from the 1630s onwards. Their representations occupy the middle ground between the realistic rendering of the naturalists [e.g. Fig. 299] and the fanciful rendering of

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<sup>1067</sup> Dodoens (edition of 1563), pages 372–373, available via <https://archive.org/details/mobot31753000817624/page/ccclxxii/mode/2up> (accessed January 25, 2021).

<sup>1068</sup> Findlen, *Possessing Nature*, 44.

<sup>1069</sup> E.g. Pliny, *The Natural History*, 14.19. See also Fuchs (1542), pages 529–532, available via <https://archive.org/details/Dehistoriastirp00Fuch/page/530/mode/2up> (accessed January 25, 2021).

<sup>1070</sup> Cat. Nos. 39, 56, 57, 84, 85, 86, 98, 126, 129, and 145.

Kircher [Fig. 298]. Such roots were usually carved to enhance their resemblance to the human form.<sup>1071</sup>

### Summary: variety and repetition – *copia* and *copie*

It is generally not known how the collections pictured in constcamer paintings were assembled. Even when the material collection on which a painting is based is known, the representation is as much fiction as reality. Yet clues can be found in the painted ensembles that point to creators or patrons, or both, and the depicted subjects and objects themselves can also provide insights. Over time, two of the largest constcamer paintings have been lost, while their copies have survived. Both pendants were made for the same Archdukes, who are furthermore closely associated with the *Five Senses* series. This influential series was the model for and subject of many reproductions and variants that would follow.

One of the difficulties associated with the constcamer genre is that of attribution. It is usually not possible to go beyond descriptions such as “in the style of” or “from the workshop of.” Signatures and dates can elaborate on the genesis of certain artworks, but these cannot be taken at face value. It was not yet customary to sign and date paintings, and studio practices and collaborations are not fully acknowledged by them. While the overview generated through the constcamer catalogue and dataset invites the search for developments within the genre over time, it has become clear that there is no linear progression. Rather, we can speak of versions, of certain compositions and styles that are repeated along family lineages, associated members, and followers.

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<sup>1071</sup> Pilaski, “The Munich Kunstkammer,” 132.

The individual elements depicted in constcamer paintings inform us about what was traded at the Antwerp art markets, and collected both locally and at the archducal courts of the Spanish Habsburg rulers over the Netherlands. Popular concepts within the pictures of collections are those of wisdom and eloquence (i.e. *sapiens*), as opposed to ignorance and iconoclasm (i.e. *insapiens*). A wide variety of sources were probably consulted, including material objects and model books. The abundance of representations is extremely detailed, in both *principael* and variants thereof, and attests to the dexterity, visual acuity, and imaginative capacity of the creators involved. The study of pictorial similarities within the genre makes the correlations between constcamer paintings visually understandable.

# Part IV:

## Case studies

## Introduction to the cases

The cases studies presented in this final part of the thesis are the direct result of the methods and approaches chosen (see chapter 3). By means of careful looking, identifying what can be seen and trying to understand the meaning of a selection of depictions, three cases emerged that merited further study.

The first case study is concerned with the *perpetuum mobile*, an instrument Cornelis Drebbel devised in the early seventeenth century. Although no material examples have survived, the instrument is known from textual sources, including Rubens' letters,<sup>1072</sup> and from pictorial sources, primarily constcamer paintings. Digital annotation of the various perpetual motion machines depicted in the constcamer catalogue led to the recognition of an anomalous representation. The pictorial context provided by the *Allegory of Hearing* gives insight into contemporary conceptions of the meaning of this particular *perpetuum mobile*.

Secondly, among the pictures-within-pictures about classical mythology and ancient history, numerous stories of Ovid's *Metamorphoses* could be discerned. This *Schilders Bybel*, as van Mander referred to it in his vernacular commentary, challenged painters to give pictorial form to ancient poetry.<sup>1073</sup> Themes from all fifteen books of the *Metamorphoses* are represented in the constcamer catalogue. Special attention will be paid to the tale of Achilles among the daughters of Lycomedes, the central theme of three constcamer paintings, as well as that of Minerva and the Muses, included as a picture-within-picture in

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<sup>1072</sup> Rubens' letters that mention the *perpetuum mobile* date from 1623, 1624, 1625, 1629, and 1634. See Rubens and Magurn, *The Letters of Peter Paul Rubens*, 91, 97–98, 101, 322–23, 394, 449 (note 2) & 493 (note 6). Rubens probably encountered such an instrument in the archducal collections, and may have acquired one himself. In 1629, he met Drebbel briefly in London.

<sup>1073</sup> Van Mander, *Het Schilder-Boeck*, part 5, fol. \*4v.

two of those. Inventive compositions and their reproductions express interpretations of the deeper meanings of the myths, which could be approached through van Mander's *Wtlegghing*.

The third case study focuses on a subset of objects that have been largely overlooked in the context of constcamer paintings, namely scientific instruments. The sense of sight had special significance for such *scientifica* or things with which knowledge – of both the macro- and microcosm – is produced. These rarely studied objects used for *kosmographia* or the description of the world were systematically annotated based on their pictorial properties. The chapter on this case study is divided into four sections, dealing first with the definition of *scientifica*, and then with the various occurrences within the constcamer dataset, the importance of the then recently invented telescope, and proverbs relating to eyeglasses and thus alluding to vision. Newly uncovered details will reveal early modern views of the paths leading to knowledge, and ultimately self-knowledge.

These three case studies are intended as examples of what can be achieved by taking a dataset as a reference point for research. They were made possible by the digital approach to constcamer paintings and the structured analysis of their contents.

# 11 Donckere's Perpetuum Mobile:

## the first barometer?

Little is known about Ghijsbrecht Donckere, who was active at the court of Archdukes Albert and Isabella in Brussels in the first quarter of the seventeenth century.<sup>1074</sup> Donckere is sometimes associated with the invention of the barometer, roughly twenty years before Evangelista Torricelli's (1608-1647) experiment in the service of Ferdinando II (1610-1670), Grand Duke of Tuscany, in 1643. There was previously no visual record of Donckere's device, called a *perpetuum mobile*, which led to speculation based on two archival sources.<sup>1075</sup> The rediscovery of a third source, and, more importantly, the identification of his instrument as depicted in a constcamer painting, will shed new light on this issue.

This case study proposes that Donckere's *perpetuum mobile* can be found in the painting *Allegory of Hearing* (ca. 1618-1621) [Cat. No. 134] by Jan Brueghel I and Peter Paul Rubens (see chapter 10). The instrument is shown mounted against a wall on the left side of the painting [Figs. 224 and 225].<sup>1076</sup> Its shape might not be what one would first expect from a *perpetuum mobile* or a barometer and requires further explanation, while the painted surroundings provide us with a context for the interpretation of Ghijsbrecht Donckere's

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<sup>1074</sup> This name has been spelled in various ways: Ghijsbrecht de Donckere, Gijsbrecht de Doncker, Ghijsbrecht Doncker, Gijsbrecht Doncker. For consistency, the spelling "Ghijsbrecht Donckere" was chosen, as used in the following archival source: R.A.B., inv. 15–16, nr. 361 (*Brugse Vrije Registers*, fol. 108v).

<sup>1075</sup> Michel, "Le Mouvement Perpetuel," 289–94; Drake-Brockman, "The Perpetuum Mobile," 144.

<sup>1076</sup> Vera Keller also noticed the instrument, without realizing its significance. One single sentence in her 581-page dissertation states that "a clock incorporating a glazen tube half-filled with water can be found in Bruegel's *Allegory of Hearing* in the Prado," which she seems to attribute to Daniello Antonini. See Keller, "Cornelis Drebbel," 259. See also Marcaida López, "Portraying Technology," 393 & 395-396 (note 21).

invention. In order to demonstrate that it is indeed Donckere's instrument that is depicted in the *Allegory of Hearing*, and to determine whether or not it can be seen as a barometer, the history of the barometer will first be examined in more detail.

The next question to answer is what is a *perpetuum mobile*? This will lead us to Donckere's contemporary Cornelis Drebbel (1572-1633) and the concept of the *primum mobile*. Subsequently the relationship between the *perpetuum mobile* and cabinets of curiosities, as well as constcamer paintings, will be examined. The theme of the Allegory of Hearing requires an analysis of the conceptions of hearing and music in the early seventeenth century. Finally, by analyzing Donckere's device in the context of the concept of *musica universalis*, a better understanding will be gained of the meaning and function of this unusual perpetual motion machine.

## History of the barometer

The barometer is an instrument used to measure atmospheric pressure.<sup>1077</sup> Evangelista Torricelli, philosopher and mathematician to Ferdinando II, was one of the first to put forward the notion that air has weight as described in his famous letter of June 11, 1644. In it he recounts a philosophical experiment, "not simply to produce a vacuum, but to make an instrument which might show the changes of the air, now heavier and coarser, now lighter and more subtle." His reasoning is accompanied by a drawing of the experimental setup [Fig. 213]. However, Torricelli admits that he has not yet managed "to find out with the instrument *EC* when the air is coarser and heavier and when more subtle and light; because

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<sup>1077</sup> Middleton, *The History of the Barometer*, x.

the level *AB* changes from another cause (which I never thought of), that is, it is very sensitive to heat and cold, exactly as if the vase *AE* were full of air.”<sup>1078</sup>

The liquid Torricelli used in his experiment was mercury, commonly known as quicksilver. In order to demonstrate the possibility of creating a vacuum, as well as the weight of the air, he filled two differently shaped tubes, *A* and *B*, with mercury and placed them upside down into a vase *C*, partly filled with mercury, and topped up with water *D* [Fig. 213]. As soon as the openings of *A* and *B* came into contact with the mercury in *C*, the volumes inside the two differently shaped tubes both dropped to the level *AB*. When the tubes were raised to the level of the water, the mercury rushed out of the tubes while water rushed in all the way up to *E*.

Torricelli explained this phenomenon as follows: first of all, “We live submerged at the bottom of an ocean of the element air.”<sup>1079</sup> Consequently, on “the surface of the liquid in the basin presses a height of fifty miles of air” that pushed the mercury up to a certain height inside the two tubes where it was in balance with the weight of the external air. Water was subsequently pushed up much higher, since it was less heavy than mercury.<sup>1080</sup>

The idea of creating an instrument to measure pressure changes, as expressed in this letter of 1644, seemed unprecedented, until textual evidence of a possible precursor emerged. An archival source from 1621 led some scholars to suggest that it was Ghijsbrecht Donckere who invented the barometer. This document can be found in the State Archives in Bruges as part of the *Brugse Vrije Registers*, and reads as follows:

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<sup>1078</sup> This letter was written in Florence and addressed to Michelangelo Ricci in Rome. For a complete transcript, see Middleton, 23–24. For a slightly different interpretation of Torricelli’s proposed instrument, see Shank, “What Exactly Was Torricelli’s “Barometer?”

<sup>1079</sup> West, “Torricelli and the Ocean of Air,” 66–67. Original sentence in Italian: “*Noi viviamo sommersi nel fondo d’un pelage d’aria elementare.*” Surprisingly, Middleton suspected that the word “*elementare*” was added to make a musical cadence to this fine phrase.” Middleton, *The History of the Barometer*, 25. In my opinion, *elementare* could very well refer to air as being one of the four Aristotelian elements.

<sup>1080</sup> Middleton, *The History of the Barometer*, 24.

*Ghijsbrecht Donckere Ingeniaris van haerlieder hoocheden, de somme van vier ponden grooten, hem bij den collegie ghejont ende toegheleijt in bekentenesse van zeker Instrument bij hem gheinventeert, ende aen den collegie ghepresenteert ende gheschonken, ghenaeempt perpetuus motus, het welcke zonder ijemandts toedoen altijts continuelick beweecht ende gouverneert dach ende nacht voorsegghende de veranderinghe van 't weder, 'tsij goet ofte quaet bij ...*<sup>1081</sup>

In 1961, historian of science Henri Michel translated this source into French, paying special attention to the last line. Ten years later, he stated that the source describes Donckere's instrument as one predicting changes, not in temperature, but in the weather (*weder*).

According to Michel, this meant that we are dealing with a barometer, an instrument with a meteorological application.<sup>1082</sup> Today, meteorologists use changes in air pressure, which can be measured with a barometer, to predict short-term changes in the weather.<sup>1083</sup>

The interpretation of Ghijsbrecht Donckere's invention as a barometer was picked up mainly by Jennifer Drake-Brockman in 1994 and Arianna Borrelli in 2008.<sup>1084</sup> The latter also made mention of a second archival source from 1619 concerning Donckere's instrument.

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<sup>1081</sup> R.A.B., inv 15–16, nr. 361 (*Brugse Vrije Registers*, fol. 108v). Transcription partly based on Van Werveke, "Ghijsbrecht de Doncker," 236. English translation: "Ghijsbrecht Donckere, Engineer of their highnesses, the sum of four pounds grooten [the local currency], granted and given to him by the college in acknowledgement of a certain Instrument invented by him, and presented and donated to the college, called perpetuus motus, which without anyone's intervention always continuously moves and governs day and night foretelling the changes in the weather, either good or bad by ..." With thanks to Wilfried Habenicht, who noted that the *ponden grooten* could refer to the Habsburg Groschen or the Flemish Pound.

<sup>1082</sup> "Ce texte dit donc clairement 'le changement du temps' (*veranderynghe van 't weder*) et non, comme je l'avais écrit en 1961: le changement de température. Nous sommes donc en présence d'un vrai baromètre, d'application météorologique." Michel, "Le Mouvement Perpetuel," 294.

<sup>1083</sup> René Descartes (1596-1650) was the first to add a scale to Torricelli's tubes and, more importantly, to question – in writing at least – the influence of changes in weather on the pressure of the air, in a letter to Marin Mersenne (1588-1648) dated December 13, 1647. See Middleton, *The History of the Barometer*, 45–46.

<sup>1084</sup> Drake-Brockman, "The Perpetuum Mobile," 144; Borrelli, "The Weatherglass," 114–16.

While Borrelli referred to a quote from Bert Bolle's book *Barometers* (1978), a more complete transcript can be found in the *Bulletijn der Maatschappij van Geschied- en Oudheidkunde te Gent* (1908). Here we find a short article by Alfons Van Werveke, entitled "Ghijsbrecht Donckere, the inventor of the water barometer."<sup>1085</sup> Van Werveke arrived at this conclusion based on an account nowadays kept in the State Archives in Ghent:

*Actum XXen Septembris XVJe neghenthene.*

*Is ghecompareert Cornelia Oloffs, huusvrauwe van Ghijsbrecht de Donckere, ingenieur van Haerlieder Serenissime Hoocheden, presenterende an het Collegie zeker instrument, nieuwelijnghe bij denzelven haeren man gheinventeert, ghenaeemt motus perpetuus, bij dewelcke men door het upclimmen van het water daghelicx can zien de ruijdachticheijt van het weder, metghaders door het nederdalen het verzoeten van het wedere, ende door het te zeer hooch climmen ende brobbelen de anstaende tempeesten van de see. Ende is haer toegheleijt voor vereerijnghe dertich gulden.*

*Hiernaer volght de maniere hoe men 'tzelve instrument moet regieren.*

*Om het water in 't ghas te krijghen, zo zal men het water in een teele doen ende het ghas daarin zetten met het onderste, ende het bovenste van het ghas waerm maecken. Ten anderen of het quaeme, dat het ghas ghebroken wierde, zo zal men een ander nemen ende met sement vaste maecken beneden 't coper.<sup>1086</sup>*

<sup>1085</sup> Van Werveke, "Gijsbrecht de Doncker," 234–36.

<sup>1086</sup> Van Werveke, 235. The archival source is referred to as R.A.G., AR3, nr. 189 (*Kasselrij Oudburg*, fol. 96). See also Borrelli, "The Weatherglass," 114–15. English translation: "Act of September 20, 1619. Cornelia Oloffs has appeared, housewife of Ghijsbrecht Donckere, engineer of Their Serene Highnesses, presenting to the college a certain instrument, newly invented by her husband, called motus perpetuus, with which it is possible to see every day by the ascent of the water the roughness of the weather, by the descent of the water the weather calming down, and by an excessive ascent and bubbles that there will be storms at sea. And she is granted out of appreciation thirty guilders. After this follows the way in which the instrument is to be managed. In order to get the water into the glass, one shall put the water in a vessel and place the bottom of the glass in it, and heat the upper part of the glass. If the glass breaks, one shall get another glass and fix it with cement underneath the copper."

Both sources contain surprisingly similar descriptions, even though this time Donckere's wife is said to have presented the invention to the *Collegie*. Additionally, the use of the instrument for predicting weather changes is described in more detail, and instructions are given for its assembly.

#### New discoveries

In addition to these sources, a third document dating from 1618 has come to my attention. An account from the States General of the United Dutch Provinces was published in the *Bijdragen en Mededeelingen van het Historisch Genootschap Gevestigd te Utrecht, Eerste Deel* (1877). It is announced in the *Resolutiën der Staten-Generaal* as "Ghijsbrecht Donckere alias the Philosopher receives 100 guilders for his offer of a perpetuum mobile,"<sup>1087</sup> and part of it reads as follows:

*Vertoont ende geeft oitmoedelijck ende met alle eerbiedicheyt te kennen, de huysvrouwe van Ghijsbrecht Doncker alias den Filosooph, hoe dat denselven haeren man onder andere schoone ende heerlijcke consten, nu onlanx gemaect, gevonden ende geinventeert heeft een zeer schoon, heerlijk ende constich stuck wercx, genaemt Propetu Motum, 'twelck van selffs werckende ende gaende is, sulex dat diergelijck stuck werek noyt alhier in de Landen gesien noch geinventeert en is geweest. ... Is Ghijsbrecht Doncker alias den Filosooph toegelecht tot eene vereeringe de somme van hondert guldens, voor dat hij hare Ho. Mo. vereert ende*

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<sup>1087</sup> Original description in Dutch: "Ghijsbrecht Doncker alias den Filosooph krijgt 100 gld. voor zijn aanbieding van een perpetuum mobile." Smit, *Resolutiën Der Staten-Generaal*, 392–93. Accessible online via <http://resources.huuygens.knaw.nl/retroboeken/statengeneraal/> -> Deel 3 (1617-1618, GS 153) NR (accessed January 26, 2021). The archival source is referred to on page 393, note 2650a, as 'A.R.A., S.G. 7477', referring to the *Algemeen Rijksarchief* or National Archives in The Hague.

*gepresenteert heeft seecker stuck wercx bij hem onlancx geinventeert, genaempt Perpetuum Mobile, 'twelck van selffs werckende ende gaende is.*<sup>1088</sup>

Here again, Donckere's wife is the one presenting the *perpetuum mobile* to an interested buyer. Based on this document, however, it seems that it was only very recently that Donckere invented his perpetual motion machine. Donckere is referred to not as an engineer but as a philosopher, and the description of his instrument does not yet allude to predicting changes in the weather.<sup>1089</sup> If Donckere's device was not necessarily associated with forecasting weather changes, what purpose did it actually serve?

### *Perpetuum mobile*

The aforementioned archival sources refer to Ghijsbrecht Donckere's instrument as a *motus perpetuus* or *perpetuum mobile*. This term refers to the concept of perpetual motion.<sup>1090</sup> A perpetual motion machine would move all by itself, continuously and without external energy input of any kind (*'twelck van selffs werckende ende gaende is*).<sup>1091</sup> Cornelis Drebbel played a pivotal role in interest in this concept around the turn of the seventeenth century.

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<sup>1088</sup> Transcription based on Leupe, *Bijdragen en Mededeelingen*, 184. Accessible online via [https://www.dbnl.org/tekst/\\_bij005187701\\_01/colofon.php](https://www.dbnl.org/tekst/_bij005187701_01/colofon.php) (accessed January 26, 2021). English translation: "Demonstrated and generously showed with all due respect, the housewife of Ghijsbrecht Doncker alias the Philosopher, how her husband among other beautiful and delightful arts, now recently made, found and invented a very beautiful, delightful and artful piece of work, called Propetu Motum, which works by itself and keeps going, in a way that such a piece of work has never been seen or invented here in the Countries. ... Ghijsbrecht Doncker alias the Philosopher is granted out of appreciation the sum of one hundred guilders, because he honored and presented Their Excellencies with such a piece of work recently invented by him, called Perpetuum Mobile, which works and keeps going by itself."

<sup>1089</sup> As will become clear in the following section, both the *perpetuum mobile* and the barometer were considered philosophical instruments in the seventeenth century.

<sup>1090</sup> Perpetual motion is a "state in which movement or action is or appears to be continuous and unceasing." See [https://en.oxforddictionaries.com/definition/perpetual\\_motion](https://en.oxforddictionaries.com/definition/perpetual_motion) (accessed January 26, 2021). For additional historical information, see <https://www.zedler-lexikon.de/index.html?c=standardsuche&l=en> -> Perpetuum Mobile (accessed January 26, 2021).

<sup>1091</sup> Ord-Hume, *Perpetual Motion*, 19–26; Michal, *Das Perpetuum Mobile*.

Drebbel, both an engineer and a philosopher himself, was born in Alkmaar, the Netherlands, in 1572.<sup>1092</sup> As early as June 21, 1598, he obtained a patent from the States General for a clockwork mechanism indicating the hours of the day, which was said to work for over a hundred years without having to wind up the instrument.<sup>1093</sup> The invention Drebbel is most famous for, however, is his so-called *perpetuum mobile*.

Cornelis Drebbel's *perpetuum mobile* was probably first mentioned in 1604, in a letter by the English mapmaker John Speed.<sup>1094</sup> The following year Drebbel moved to London and entered the service of King James I (1566-1625), to whom he presented a version of his *perpetuum mobile* in 1607.<sup>1095</sup> Apart from a few extant sketches made by eyewitnesses, the main source of visual information about this instrument is the genre of constcamer paintings [Appendix D.1]. A *perpetuum mobile* can be found, for example, in *The Archdukes Albert and Isabella Visiting the Collection of Pierre Roose* (ca. 1622).<sup>1096</sup> The instrument is standing on the table on the left side of the panel [Cat. No. 49].

Based on such depictions, in combination with textual sources, it is known that Drebbel's device consisted of a round sphere containing an astronomical almanac or clock, presumably the self-winding one patented in 1598 (see above), indicating with "two

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<sup>1092</sup> In 1595 Drebbel married Sophia Jansdochter, the younger sister of Hendrik Goltzius (1558-1617) [e.g. Fig 123] to whom he had been apprenticed around 1587. Goltzius and Drebbel shared an interest in both engraving, alchemy, and natural philosophy. See Snelders, *Drebbel, Cornelis*, n.p.

<sup>1093</sup> The original account (3328) of the States General is transcribed in Jaeger, *Cornelis Drebbel*, 119–20. "*een horologie oft uuyrwyser, t welken den tijt van vijfflich, 't sestich, jae hondert oft meer jaren achter een sal mogen gebruicken sonder opwinden, oft yet anders daer toe te doen, soo lange de raeden, oft t' ander gaende werck niet en zijn versleten.*"

<sup>1094</sup> Drake-Brockman, "The Perpetuum Mobile," 125–28. "A gentle man being Duche born and dwelling at Ipswich hath made a continuwall motion," according to John Speed. His letter is not dated except for "Sunday 3 June." According to Drake-Brockman, June 3 only fell on a Sunday in 1604 and 1610 in the first decade of the seventeenth century. June 3, 1604 seems to be the more likely of the two, and would fit in with the journey Drebbel undertook from Alkmaar to London. Keller refers to a document signed in Ipswich on April 22, 1605, which leads me to believe that Drebbel resided in or near Ipswich for about one year. See Keller, "Cornelis Drebbel," 55.

<sup>1095</sup> Keller, "Re-Entangling the Thermometer," 243–44.

<sup>1096</sup> Michel, "The First Barometer," 88–92.

different hands the month and the day and in which signs of the zodiac the sun and the moon are.” This sphere was surrounded by a glass tube in which water moved “all the time, up and down, twice every twenty-four hours, like the sea.”<sup>1097</sup> The construction was surmounted by a smaller sphere showing the phases of the moon, which was supposedly related to the water in the tube, as if its movement would show the tides. Usually, the glass tube was supported by two harpies,<sup>1098</sup> or birds [e.g. Cat. No. 133], while the moon-phase sphere was sometimes finished with a cross on top. These components were mounted on a pedestal, and the whole piece seems to have been a few dozen centimeters high.<sup>1099</sup>

The glass tube half filled with water that seemed to move on its own particularly attracted great interest. Nowadays we can offer a clear explanation for the fluctuations in height, which were caused by changes in both temperature and atmospheric pressure [Fig. 222].<sup>1100</sup> The water in the tube was connected to the air trapped inside the sphere with the clockwork mechanism, on the one side, and to the surrounding air, on the other. But how was this movement explained, other than as a result of the relationship with the tides (as mentioned above), at a time when the functionality of instruments such as the thermometer and barometer was not yet established? Cornelis Drebbel published two treatises that offer a better understanding of the theory he proposed to explain the observed phenomena.

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<sup>1097</sup> A detailed description can be found in Heinrich Hiesslerle von Chodaw’s account of King James I’s *perpetuum mobile*, which he encountered during his four months spent at the English court in 1607. For a complete transcript, see Drake-Brockman, “The Perpetuum Mobile,” 128–29; Keller, “Drebbel’s Living Instruments,” 47. Middleton likewise concludes that “there seems to be no doubt that the clocks made by Drebbel were those referred to in the patent of 1598.” Middleton, *A History of the Thermometer*, 20.

<sup>1098</sup> The decorative figures are usually harpies, personifications of storm winds, and not sphinxes, as suggested by Keller. Keller, “Cornelis Drebbel,” 258; Bradburne, “Going Through the Motions,” n.p.

<sup>1099</sup> John Speed reported that the device, excluding the protective stand that it has in his sketch, is 15.2 centimeters in diameter. Drake-Brockman, “The Perpetuum Mobile,” 125. It seems that subsequent versions of Drebbel’s invention grew in size, seen in relation to the other elements represented in the relevant constcamer paintings [e.g. Cat. No. 49]. The largest versions were created for James I and Rudolf II, but Drebbel made a simpler form in great numbers as well. Tierie, *Cornelis Drebbel (1572-1633)*, 37.

<sup>1100</sup> For a detailed explanation, see Müller, *Thermodynamik*, 79–96. Interestingly, Middleton does make mention of Drebbel’s *perpetuum mobile* in his history of the thermometer, but leaves the instrument out of his history of the barometer.

Drebbel's first treatise originally dates from 1604, but it has only been preserved in reprints. His *Een kort tractaet van de natvere der elementen, ende hoe sy veroorsaecken, den vvint, reghen, blixem, donder, ende waeromme dienstich zijn* (Haarlem: 1621) contains one illustration [Fig. 214].<sup>1101</sup> This represents the "inverted-glass" experiment, and demonstrates Drebbel's knowledge of the expansion and contraction of air under the influence of fire.<sup>1102</sup> The accompanying text explains how water can be transformed into air, thus making the water invisible and greater in volume. This, he argued, causes wind, while an abrupt transformation into air will cause lightning and thunder. Conversely, the cooling down of air results in little drops of water falling back down to earth (or rain). His reasoning reflects an Aristotelian understanding of the elements.<sup>1103</sup>

The second publication dates from 1607 and contains a letter that supposedly accompanied the *perpetuum mobile* presented to King James I. However, in his *Wonder-vondt van de eeuwighe bewegingh* (Alkmaar), Drebbel no longer makes mention of the inverted-glass experiment.<sup>1104</sup> Instead, he explains how he investigated the cause of the *primum mobile*, "that feeling / the first principle of God's work / and therefore an entrance to true knowledge of Nature." He finally figured out, and is delighted to share with the King, what the wondrous cause is, not only of the *primum mobile*:

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<sup>1101</sup> Drebbel, *Een Kort Tractaet*. English translation: "On the Nature of the Elements and how they cause the wind, rain, lightning, thunder, and why they are useful." A German version was printed in Leiden as early as 1608. Keller characterizes the (1608) treatise as "a complete natural philosophy in under six thousand words." Keller, "How to Become," 126–28.

<sup>1102</sup> For a lengthy discussion of the inverted-glass experiment, see Borrelli, "The Weatherglass," 67–130. In his eyewitness account, Von Chodaw writes that when the King "asked again from what the perpetual motion derived its power," Drebbel replied that it was "the Air, the principal element, which made all things move." Drake-Brockman, "The Perpetuum Mobile," 128 & 147; Borrelli, "The Weatherglass," 103.

<sup>1103</sup> Drebbel, *Een Kort Tractaet*. Especially chapters 4 & 8. The first part of the treatise is Aristotelian; the last two chapters (10 & 11) deal with alchemy. See Keller, "How to Become," 138.

<sup>1104</sup> Drebbel, *Wonder-Vondt*. English translation: "Discovery of the miracle of perpetual motion." Jaeger characterizes this treatise as a theological and theosophical contemplation of the power of water and of fire. Jaeger, *Cornelis Drebbel*, 5.

*Alsoo oock hoe de Hemel beweeght / alle de Sterren / die Planeten / het Water / die Aerde :  
 en hoe oft door wat oorsaeck die Aerde ghedraghen wordt / in't midden van de Lucht /  
 waerom het Water hem Circkel-rondt om den Aerdtbodem sluyt /waerom alle dinghen dalen  
 nae't midden der Aerden / uytghesondert het vyer. Ende ter contrarie / hoe die Son / die  
 Maen / en alle die Sterren/ in de hooghte ghedraghen worden : Also oock de oorsaeck van  
 Regen / van Wint / van Donder / van Blixem / van Vloedt / en hoe alle dinghen ghevoedt  
 worden / en haer vermeerderen.<sup>1105</sup>*

As a result, the Aristotelian *primum mobile* is introduced as the true cause of motion of the *perpetuum mobile*.<sup>1106</sup>

### *Primum mobile*

The concept of the *primum mobile* – the “first motion” or rather the prime mover – refers to Aristotle’s *Metaphysica* (see chapters 4 and 5). According to Aristotle, “the ‘ultimate heaven’ must be eternal. Then there is also something which moves it [...] something which moves without being moved, something eternal which is both substance and actuality. [...] the actuality of ‘the heaven’ is primary locomotion [...] Such, then, is the first principle upon which depend the sensible universe and the world of nature.”<sup>1107</sup> In other words, the prime

<sup>1105</sup> Drebbel, *Wonder-Vondt*, fols. 3v&4r (based on my own count). English translation: “but also how the sky moves / all of the stars / the planets / the water / the earth : and how or by what cause the earth is being carried / in the middle of the air / why the water circularly encloses the earth / why all things descend to the middle of the earth / except for fire. And by contrast, how the sun / the moon / and all the stars are being carried up high : and also the cause of the rain / of wind / of thunder / of lightning / of high tide / and how all things are being fed / and increase it.”

<sup>1106</sup> Drake-Brockman suggested that Drebbel “clearly means by it the *primum mobile* as manifested in nature rather than Aristotle’s remote sphere.” Drake-Brockman, “The Perpetuum Mobile,” 129. See also Keller, “Drebbel’s Living Instruments,” 43. It seems to me that the seventeenth century was far more indebted to Aristotelianism than has been previously assumed (see note 1079, and also chapters 7 and 8).

<sup>1107</sup> Aristotle, *Metaphysics*, 12.1072a–12.1072b.

mover accounts for the (apparent) daily rotation of “the heaven,” which is understood as the outermost celestial sphere, or the sphere of the fixed stars. Consequently, this *primum mobile* [Fig. 36] is responsible for all spatial motion in the universe and regulates terrestrial cycles, such as night changing into day and back again.<sup>1108</sup>

In sixteenth- and early seventeenth-century representations of the universe we often encounter the *primum mobile*, designated as the outermost celestial sphere. An influential example can be found in Peter Apian’s *Cosmographicus Liber* [Fig. 226] (see chapter 8).<sup>1109</sup> At the center, this representation [Fig. 215] shows two Aristotelian elements, Earth and Water, surrounded by Air and Fire.<sup>1110</sup> There follow seven planetary spheres, in which move the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn. The eighth, ninth, and tenth heavens contain the signs of the Zodiac, and hold the Firmament (sphere of the fixed stars), the Crystalline (referring to Genesis 1:7), and finally the *Primum Mobile* (the outermost celestial sphere) [see also Fig. 199].<sup>1111</sup> Outside the universe we find the Empyrean, the dwelling of God and the elected [Fig. 215]. Aristotle’s cosmography was thus appropriated and adapted to Christian beliefs.

Even though in the preceding and following decades views of the cosmos emerged that differed from the geocentric Ptolemaic system of Apian, such as the geoheliocentric

<sup>1108</sup> Aristotle, 12.1072a-12.1073a. Aristotle explains this by means of the orbit of the sun, rotating around the earth. See also Hobart, *The Great Rift*, 64.

<sup>1109</sup> Apian, *Cosmographicus Liber*, part 1, fol. 6. In the lower left corner of the *Allegory of Sight* [Cat. No. 17], in close proximity to Jan Brueghel I’s signature, a representation of Apian’s *Cosmographicus Liber* can be found [Fig. 226]. The front page shows a mirrored image of the terrestrial globe and is inscribed with “[C]osmogr[aphie].” This could perhaps refer to one of the Dutch editions of Apian’s book.

<sup>1110</sup> Note that Drebbel upholds the Aristotelian view that water encloses the earth (*waerom het Water hem Circkel-rondt om den Aerdtbodem sluyt*).

<sup>1111</sup> Apian even invented an instrument called a *primum mobile* [Fig. 217], and published a treatise on this instrument in 1534 [Fig. 216]. Apian, *Instrumentum Primi Mobilis*. For a similar woodcut by John Day [Fig. 199] from William Cuninghame’s *Cosmographicall glasse* (London: 1559, fol. 50), see Remmert, “Visual Legitimation of Astronomy,” 335.

Tychonic system of the late sixteenth century [Fig. 219],<sup>1112</sup> the concept of the *primum mobile* remained largely unchallenged. The exception is Copernican heliocentrism (first published in Nuremberg in 1543) [Fig. 218],<sup>1113</sup> and derivatives thereof such as Johannes Kepler's *Mysterium Cosmographicum* (Tübingen: 1596) [Fig. 220],<sup>1114</sup> in which the sphere of the fixed stars became immobile. As there was no consensus yet (see chapter 10) [Cat. No. 73], the *primum mobile* as the first principle of God's work, responsible for all motion in the universe, provided Drebbel with a valid explanation for his newly invented *perpetuum mobile*.<sup>1115</sup> At the same time, it can be argued that in his understanding the working of the philosophical instrument depended on the transformations of the Aristotelian elements, set in motion by fire.<sup>1116</sup>

## Collecting curiosities

The theoretical underpinnings of the *perpetuum mobile* did not help contemporary philosophers and engineers to replicate Drebbel's invention. He remained silent when it came to practicalities such as the construction of the device. In 1607, Drebbel only shared that he would be willing to demonstrate his experiments (which explore nature, God's creation) with the intention of giving many people a taste of "that pleasant sweetness of the

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<sup>1112</sup> The *Hypothesis Tychonica* was published in Hevelius, *Selenographia, Sive, Lunae Descriptio*, 163.

<sup>1113</sup> Copernicus, *De Revolutionibus Orbium Coelestium*, book I, chapter 10, fol. 9v.

<sup>1114</sup> Kepler, *Mysterium Cosmographicum*, 54a. The second edition was published, unaltered in this respect, in 1621. Kepler argued that the sun was the source of motion – the prime mover – for the planets. See Voelkel, *The Composition of Kepler's Astronomia Nova*, 28–31.

<sup>1115</sup> Simon Stevin (see chapter 8) was one of the first to refute the possibility of a *perpetuum mobile* around 1605. Pisano and Bussotti, "Machines, Machineries and Perpetual Motion," 73.

<sup>1116</sup> Dijksterhuis, "Magi from the North," 129 & 135. In Drebbel (1621), chapter 9, we read that fire is subtle air, air is subtle water, water is subtle earth, and earth is coarse fire. According to chapter 1, fire was first separated from God (and is still in closest proximity to God [e.g. Fig. 215]). Fire is therefore most subtle, and has the power to "clarify" and change all things (chapter 2).

hidden cause of things.”<sup>1117</sup> The mystery surrounding the working of the *perpetuum mobile*, and its invisible cause of motion, made it a much sought-after collectible. It became a highly desirable part of collections gathered in cabinets of curiosities (see chapter 6), and found its way into pictorial representations of such collections in constcamer paintings [Appendix D.1].

In 1610, Drebbel entered the service of Holy Roman Emperor Rudolf II, who established the renowned *Kunstkammer* housed in Prague Castle.<sup>1118</sup> During his stay at the court, which lasted until Rudolf’s death in 1612, Drebbel presented his new patron with a *perpetuum mobile*.<sup>1119</sup> At the time, Archduke Albert VII, the younger brother of Rudolf II, was Sovereign of the Spanish Netherlands, together with his wife Isabella Clara Eugenia. The two of them can be identified as visitors in several constcamer paintings [Cat. Nos. 9, 49, and 121]. The Archdukes were immensely interested in acquiring a *perpetuum mobile* for their own collection, but were not able to immediately get their hands on one.<sup>1120</sup> Since Drebbel

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<sup>1117</sup> Original sentence in Dutch: “waeromme ben also oock bereydt die andere proeven te vertoonen / verhopende daer door veel Menschen te doen smaken die aenghename soetheyt van de verburghen oorsaek der dinghen : want ondervindingh leert my / dat geen soeticheyt by Natuers ware kennis te verghelijcken / also ons leert verstaen die volmaeckte goetheyt / wijsheydt en mogentheydt Gods.” According to Drebbel, understanding nature equates to understanding God, with the *primum mobile* being the first principle of God’s work, which is therefore a gateway to true knowledge of nature. Drebbel, *Wonder-Vondt*, fol. 4v (based on my own count).

<sup>1118</sup> Keller, “Drebbel’s Living Instruments,” 40. For a detailed account of Rudolf’s *Kunstkammer*, see Fučíková, *Rudolf II and Prague*, 469–541.

<sup>1119</sup> Contemporary eyewitness accounts speak of a glass showing the motion of the tides. The Prague 1607–1611 inventory of the *Kunstkammer* does not yet include a perpetual motion machine, see Keller, “Drebbel’s Living Instruments,” 49. In the inventory of 1621 there is mention of a *motum perpetuum*, which was supposedly in the care of Jost Bürgi (1552–1632) at the time, see Michel, “Le Mouvement Perpetuel,” 293. On October 18, 1610, Giuliano de’ Medici wrote to Galileo: “a Flemishman is there and pretends to have found the perpetual motion machine.” He added that Kepler, who was also active at Rudolf’s court at that time, “would not accept that it was a *perpetuum mobile* until he understood the principle on the basis of which the machine works,” about which Drebbel was indeed very secretive. See Valleriani, *Galileo Engineer*, 162.

<sup>1120</sup> Shortly after Rudolf’s death, Albert enquired about his share of the inheritance of the *Kunstkammer*. The *perpetuum mobile* does not seem to have been part of it. See De Maeyer, *Albrecht En Isabella En de Schilderkunst*, 316–18; Bradburne, “Going Through the Motions,” n.p.

was not available, the Archdukes turned to the philosophers and engineers in their own service.<sup>1121</sup>

Daniello Antonini (1588-1616) was active at the archducal court in Brussels as a military officer.<sup>1122</sup> In February 1612, Antonini wrote to his former tutor Galileo Galilei (1564-1642) saying that he had heard of James I's *perpetuum mobile* and had pondered about how it worked. As he explained, "the truth might be that this motion came from a change in the air, namely that which might be caused by heat and cold."<sup>1123</sup> Subsequently he tried to make one himself with a *straight* tube, rather than the round one used for Drebbel's device. Antonini even went as far as placing a tablet behind his tube "on which thick lines, placed equidistantly, were drawn, together with numbers, so that the movement could be noted."<sup>1124</sup> The Archduke expressed great interest in Antonini's instrument, and received it as a gift. Echoing Drebbel's *perpetuum mobile*, Albert then encouraged Antonini to convert his irregular motion to a regular one, in order to make it run a clockwork mechanism.<sup>1125</sup>

It is not known if Antonini managed to fulfil this request, but he did send Galileo a second letter only a few days later, containing a sketch that clearly demonstrates his understanding of the cause of motion of the liquid in Drebbel's glass tube [Fig. 221].<sup>1126</sup> It is known, however, that in or before 1618, Ghijsbrecht Donckere, who was active at the same

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<sup>1121</sup> Between 1599 and 1631, seventy-five persons are known to have done engineering work for the Archdukes. Thomas and Duerloo, *Albrecht & Isabella*, 213.

<sup>1122</sup> Valleriani, *Galileo Engineer*, 162–63. Neither Antonini nor Donckere is listed among the archducal engineers in Thomas and Duerloo, *Albrecht & Isabella*, 213–215.

<sup>1123</sup> Middleton, *A History of the Thermometer*, 22. In his explanation, Antonini refers to the inverted-glass experiment. See also Drake-Brockman, "The Perpetuum Mobile," 137; Borrelli, "The Weatherglass," 108. The letters to Galileo dated February 4 and 11 are transcribed in Jaeger, *Cornelis Drebbel*, 115–18.

<sup>1124</sup> Drake-Brockman, "The Perpetuum Mobile," 137. Adding a scale was inventive, but Antonini was not the first to do so. A description and illustration of an air thermometer with a scale was found in an unpublished manuscript dated 1611. Santorio Santorio (1561-1636), instead of Antonini or Galileo, is nowadays credited with the invention of the thermometer in the same year as their correspondence, namely 1612. See Middleton, *A History of the Thermometer*, 6, 11–12 & 22.

<sup>1125</sup> Drake-Brockman, "The Perpetuum Mobile," 137; Keller, "Cornelis Drebbel," 259.

<sup>1126</sup> Ariotti, "An Overlooked Autograph Letter," 459; Valleriani, *Galileo Engineer*, 163. See also Jaeger, *Cornelis Drebbel*, 118.

court in Brussels as an engineer and philosopher to the Archdukes, claimed to have invented an instrument which he also called a *perpetuum mobile* – perhaps having access to Antonini’s explanation of the construction of such a device. The painting *Allegory of Hearing* dates from the same period, represents the collection of the Archdukes, and shows us a variation on Drebbel’s instrument.

## Allegory of Hearing

The *Allegory of Hearing* [Cat. No. 134] displays many references, both directly and indirectly, to the faculty of perceiving sounds, or vibrations. The palatial room is filled with a large number of musical instruments, musical scores,<sup>1127</sup> and (song)birds.<sup>1128</sup> In the center the personification of hearing is playing the lute while singing, in the presence of a deer (see chapter 10).<sup>1129</sup> Further right we encounter guns and horns, alluding to the hunt, and a hunting scene can also be distinguished through the arches that open onto a landscape with a view of the Castle of Mariemont.<sup>1130</sup> The interior walls are decorated with gilt leather hangings (*goudleer*), as well as several paintings and statuettes that refer to mythological and biblical figures and stories, all of which are related to the sense of hearing in their own,

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<sup>1127</sup> The one placed most prominently on the table with music stands shows us the Coat of Arms of the Archdukes on the right page, while the left page reads “*Di Pietro Philippi Inglese, Organista Delli Sereniss. Principi Alberto et Isabella Archidvchi d’Avstria &c de Madrigali a Sei Voci ....*” Peter Philips (1560-1628) was an English composer and organist who was active at the archducal court from 1597 to 1628. See Pliego de Andrés, “Música y Retórica,” 325; Thomas and Duerloo, *Albrecht & Isabella*, 129–35.

<sup>1128</sup> It is thought that bird calls were replicated in Flemish polyphonic music. See Smith, “Art, Science, and Visual Culture,” 94.

<sup>1129</sup> In line with the description of the sense of hearing in Ripa, *Iconologia*, 448. The naked deity has also been identified as Venus (accompanied by Cupid) or the Muse Erato. See Díaz Padrón and Royo-Villanova, *David Teniers*, 136; Pliego de Andrés, “Música y Retórica,” 320.

<sup>1130</sup> This landscape [Appendix D.13] can also be understood as a picture-within-a-picture, since Jan Brueghel I created paintings similar in subject around 1610 [e.g. Fig. 147].

subtle ways.<sup>1131</sup> A small group of musicians in the back room are actively engaged in making music.

Thus far we have overlooked one significant portion of the painting, the middle section on the right. This part has not yet been properly examined and understood. On a table and propped up against the wall a collection of clockwork measuring devices can be found. These devices have been interpreted in several ways: simply as an illustration of the collecting hobby of the Archdukes, as a reminder of the vanity of music, as metaphors for harmony, temperance, and the state mechanism, and as a reference to time and rhythm.<sup>1132</sup> This last option seems to be overemphasized, since timepieces were not yet precision instruments. Most of the depicted clocks are only equipped with one hand, which was still state of the art at the time. The only exception is the silver “mirror” clock placed prominently on the table on the far right, which has two hands to indicate both the hour and the minute – a recent invention.<sup>1133</sup> Even so, the indication of minutes is not particularly useful for musical timekeeping.

What has gone largely unnoticed is that several of the timepieces display astronomical information, of which the globe clock is an obvious example. Its octagonal base seems to hold a magnetic compass, and a gilded terrestrial sphere is elevated from the center. This globe is surrounded by four griffins that raise a second cradle holding a celestial

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<sup>1131</sup> For a detailed analysis, see Pliego de Andrés, “Música y Retórica.” The harpsichord in the foreground is particularly noteworthy. The lid of this instrument of Antwerp origin is decorated with an *Annunciation to the Shepherds* by Hendrik van Balen I. In this scene, the birth of Christ is announced with the words “*Gloria in excelsis Deo*,” as per usual written down on a scroll held by one of the angels. The divine word (Luke 2:8-14) thus reached the shepherds through the faculty of hearing, by means of the voice of an angel.

<sup>1132</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 137; Pliego de Andrés, “Música y Retórica,” 326–27; Prosperetti, *Landscape and Philosophy*, 79; Cypess, *Curious & Modern Inventions*, 121–23; Vázquez Manassero, “De la ‘Curiosidad Científica,’” 312–22.

<sup>1133</sup> Jost Bürgi, who entered the service of Rudolf II in 1604, is credited with this invention in 1577. See [http://www.math.harvard.edu/~knill/history/burgi/bea\\_proofs\\_burgi.pdf](http://www.math.harvard.edu/~knill/history/burgi/bea_proofs_burgi.pdf) (accessed January 26, 2021); Fučíková, *Rudolf II and Prague*, 61 & 66. My thanks go to Susanne Thürigen for pointing out that this clock was made in the shape of a mirror, in order to symbolize that the instrument reflects (or mirrors) the cosmos.

sphere. Based on similar extant examples, it can be inferred that this instrument was driven by a clockwork mechanism [Figs. 141, 142 and 234]. Around 1584, such globe clocks were made by Johann Reinhold (ca. 1550-1596) and sold to Rudolf II and his brother Archduke Ernest (see chapter 7).<sup>1134</sup> Perhaps one of these globe clocks ended up in Brussels as part of the collections of Archdukes Albert and Isabella, and was thus depicted in the *Allegory of Hearing* [Cat. No. 134].<sup>1135</sup> It has also been suggested that Janello Torriani's *Microcosm* [Fig. 225] and *Crystalline* (see chapter 8) bear resemblance to the two polyhedric clocks represented in this constcamer painting.<sup>1136</sup>

Astronomy was one of the leading disciplines in the contemporary realm of natural philosophy, and the clock mechanism was used as a model for the conception of cosmic order.<sup>1137</sup> As a result, astronomical instruments could be used not only for practical applications (to measure something), but also to offer models or analogies of nature, thus enabling and informing the investigation of nature.<sup>1138</sup> Now one might wonder what astronomical measuring devices or natural philosophical instruments have to do with the sense of hearing. In my view, this is best explained by the concept of *musica universalis* or the Harmony of the Spheres.<sup>1139</sup>

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<sup>1134</sup> The globe clock looks similar to instruments made by Bürgi, in whose style Reinhold worked. See King and Millburn, *Geared to the Stars*, 83–85. Records of Archduke Ernest's purchases indicate that he was especially fond of clocks. Hayward, "The Roll and Reinhold Celestial Globe," 94–96.

<sup>1135</sup> Note the trefoil openings or marks in the celestial sphere of both the *Celestial Globe Clock* [Fig. 142] and the painted version [Cat. No. 134]. On the lack of an inventory of the archducal collections and additional difficulties (e.g. the burning down of the Palace of Coudenberg in Brussels in 1731), see chapter 10.

<sup>1136</sup> If so, then Mercator's globe is concealed by the enclosed case. Alarm clocks from Philip II's collection, the father of Isabella, are also said to be included among the musical instruments. See Zanetti, "The Microcosm," 44; Zanetti, *Janello Torriani*, 284–85 & 292.

<sup>1137</sup> Borrelli, Korey, and Remmert, "Introduction: Iconography on Scientific Instruments," 5; Kragh, *Conceptions of Cosmos*, 45; Mayr, *Authority, Liberty & Automatic Machinery*.

<sup>1138</sup> Van Helden and Hankins, "Introduction; Instruments in the History of Science," 4; Bennett, "Early Modern Mathematical Instruments," 697–705; Borrelli, Korey, and Remmert, "Introduction: Iconography on Scientific Instruments," 5.

<sup>1139</sup> Madrid Casado also briefly referred to the music of the spheres because of the globe clock depicted in the *Allegory of Hearing*. Madrid Casado, "The Depiction of Science," 111.

*Musica universalis*

The early modern concept of music differs significantly from our modern understanding. Music formed part of the *quadrivium*, and together with the *trivium* they comprise the seven liberal arts taught from classical times onwards. The material for study was mostly provided by the Roman philosopher Boethius (ca. 480-524), who translated a number of influential Greek texts related to the *quadrivium* into Latin. Boethius also wrote an important treatise on music himself, *De institutione musica* (ca. 510), in which he described three categories of music: *musica mundana* (music of the universe), *musica humana* (music of man), and *musica instrumentalis* (instrumental music). His definition of music as harmony, manifested by proportion, is a highly theoretical and philosophical conception.<sup>1140</sup>

The highest, most noble form of music was the music of the universe, also known as *musica universalis*. This notion was based on both Plato's *Timaeus* (ca. 360 BC) and the musical intervals found in the harmonic ratios of Pythagoras' *tetractys*.<sup>1141</sup> In his *Naturalis Historia*, Pliny the Elder informs us about *musica universalis* as follows.

Pythagoras, employing the terms that are used in music, sometimes names the distance between the Earth and the Moon a tone; from her to Mercury he supposes to be half this space, and about the same from him to Venus. From her to the Sun is a tone and a half; from the Sun to Mars is a tone, the same as from the Earth to the Moon; from him there is half a tone to Jupiter, from Jupiter to Saturn also half a tone, and thence a tone and a half to the

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<sup>1140</sup> Ilnitchi, "Musica Mundana," 40; Hobart, *The Great Rift*, 23–24 & 157–59.

<sup>1141</sup> According to Hugh of Saint Victor's (ca. 1096-1141) *Didascalicon*, "harmony revealed the divine order in the nature of things." Hobart, *The Great Rift*, 157–58. Rubens was familiar with Pythagoras' ideas, for example via his copy of Iamblichus' *Vita Pythagorae* (see chapter 7), and believed he found proof in the fourth triangular number of the Holy Trinity. Meganck, "Rubens on the Human Figure," 55–56.

zodiac. Hence there are seven tones, which he terms the diapason harmony, meaning the whole compass of the notes.<sup>1142</sup>

It may be noted that the representation of the Ptolemaic universe by Apian [Fig. 215] not only presents us with a representation of the universe; it can also be used to convey the philosophical conception of cosmic harmony. The notion of the Harmony of the Spheres made a lasting impact, and pervaded well into the seventeenth century.

The sixteenth-century composer Gioseffo Zarlino (1517-1590) published a distinguished treatise on music theory, *Le istituzioni harmoniche* (Venice), in 1558. In it a chapter on the ancients can be found and how they attributed some chords of their instruments to the celestial spheres.<sup>1143</sup> Zarlino referred to the same classical authors mentioned above (Pythagoras, Plato, Pliny, and Boethius), and added a visualization of the geocentric cosmos that incorporates *musica universalis* [Fig. 223]. This representation includes a refinement introduced by Ficino (see chapter 5), who assigned a Muse to each of the celestial spheres, from whose nine voices the harmony of heaven was said to be born.<sup>1144</sup> The tonal distance of each celestial sphere is indicated in Zarlino's diagram [Fig. 223]. The outermost celestial sphere is accompanied by Urania, the Muse of Astronomy, and represents the sphere of the fixed stars. Here we again encounter the *primum mobile*, or prime mover, thought to be responsible for all motion in the universe.

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<sup>1142</sup> Pliny, *The Natural History*, 2.20. See also "Musica" in Ripa, *Iconologia*, 344–45; and "Van Pythagoras" in van Mander, *Het Schilder-Boeck*, part 5, book 15, fols. 119r–119v.

<sup>1143</sup> Zarlino, *Le Istituzioni Harmoniche*, 101–3.

<sup>1144</sup> According to Zarlino, Plato was the first to introduce this idea, but he did not yet place the Muses in a specific order. Zarlino, 102–3; Hobart, *The Great Rift*, 160–61 & 172–73. Macrobius (ca. 400 AD) also wrote on the Muses, replacing the celestial Sirens as movers of the spheres (*In somnium Scipionis* I.12.3, II.3). Guest, *The Understanding of Ornament*, 37.

The archducal court of Albert and Isabella played a key role in the spreading of a new musical style, the polyphonic counterpoint championed by Zarlino.<sup>1145</sup> Their patronage of this liberal art is on display in the *Allegory of Hearing* [Cat. No. 134]. The depicted astronomical and philosophical instruments are intricately linked to the sense of hearing, referring not so much to an audible type of music but rather to the harmonious concept of *musica universalis*. Even the Nine Muses themselves can be discerned, in a painting to the left of the arched opening, and possibly also refer to the Harmony of the Spheres (see chapter 12).<sup>1146</sup> Hidden in plain sight among the timepieces is a striking example of a *perpetuum mobile*. Like the mechanical clockwork instruments surrounding it, this instrument refers to the realms of cosmic order in general, and to the *primum mobile* in particular.

#### Donckere's instrument

The dating of the *Allegory of Hearing* – at the earliest in 1618 (see chapter 10) – corresponds roughly to the oldest textual evidence of the invention by Ghijsbrecht Donckere (May 11, 1618). This document recounts how the philosopher and engineer to the Archdukes recently “made, found and invented a very beautiful, delightful and artful piece of work.”<sup>1147</sup> Up to now, two suggestions have been made regarding the appearance of Donckere's *perpetuum mobile*. Michel suggested that the instrument looked like a variant of Drebbel's tube, while

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<sup>1145</sup> Peter Philips' madrigals were “marked by the Italian styles of expression.” Thomas and Duerloo, *Albrecht & Isabella*, 129-135 (quotation on p. 133); Hobart, *The Great Rift*, 160–61.

<sup>1146</sup> The scene is based on Ovid's *Metamorphoses*, and the story equally refers to celestial harmony. See Ovid, *Metamorphoses*, 5.250. The handbell and jingle bells, lying on the floor next to the table with the red tablecloth, were frequently associated with celestial concerts. See Díaz Padrón and Royo-Villanova, *David Teniers*, 138.

<sup>1147</sup> Leupe, *Bijdragen en Mededeelingen*, 184.

Borrelli assumed a resemblance with the J-shaped tubes sold in Liège in the 1620s.<sup>1148</sup> The painted representation of the instrument [Fig. 224] shows us the former, a variation on Drebbel's *perpetuum mobile* with as its most prominent feature the circular tube half filled with some kind of liquid. Because of this shape we can rule out that this was the instrument created and gifted by Antonini, as he himself asserted that he tried to reproduce one with a straight tube.<sup>1149</sup>

The transparent tube is placed inside a decorative casing, and is held at the top in the mouth of a lion's head [Fig. 225]. This head is held in place by three horizontal rods (two at eye level, one just below its mouth). Above the lion's head we can distinguish a sphere, with some kind of tube leading away from it to the left. The casing accentuates this upper sphere with a convex extension. A slightly slanting plane stands behind the lion's head that holds the circular tube. What appears to be a pointer is mounted on this plane, in the center of the transparent tube, pointing downwards. Below we see a blot of faded, darker paint, perhaps representing a support for the tube.

Based on our knowledge of Drebbel's *perpetuum mobile*, it is plausible that the tube, lion's head, and sphere are all part of the same system [compare with Figs. 221 & 222]. The sphere, shown as being made of metal (copper), presumably contains a reservoir of air. This volume of air is then connected via small pipes with the gilded lion's head, as well as with the left side of the transparent tube, made of glass. The right side of this tube opens to the surrounding, external air. The glass tube is partly filled with colored water or another type of liquid. The plane might act as support for the fragile tube that could easily break. Around

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<sup>1148</sup> Michel, "Le Mouvement Perpetuel," 294; Borrelli, "The Weatherglass," 115. For more historical information on the weatherglass, see: <https://www.zedler-lexikon.de/index.html?c=standardsuche&l=en> -> Wettergläser, Holländische oder Drebbelianische Wettergläser (accessed February 10, 2020).

<sup>1149</sup> In his letters to Galileo, dated February 4 and 11, 1612, see note 1123.

Donckere's instrument we see clocks that all show the same time, approximately 1:18 pm. Since the hand of the device is pointing in another direction, it is reasonable to assume that the *perpetuum mobile* is not running a clockwork mechanism.<sup>1150</sup> Nevertheless, it can only be guessed what this hand actually indicates.<sup>1151</sup>

Although quite similar to Drebbel's device, this *perpetuum mobile* deviates from its predecessor in a number of significant ways. Most notably, the device is mounted against a wall, instead of being equipped with a pedestal and standing on a table. The casing is unique within the genre of constcamer paintings. The other sixteen catalogued depictions of perpetual motion machines [Appendix D.1] follow the example of Drebbel's *perpetuum mobile* [e.g. Cat. No. 110]. Interestingly, those painted representations are all dated later than the *Allegory of Hearing* (ca. 1618-1621). A striking similarity between the two devices, on the other hand, can be found in the instructions given for its assembly in the archival source of 1619. These strongly recall the inverted-glass experiment: "In order to get the water in the glass, one will put the water in a vessel and place the bottom of the glass in it, and heat the upper part of the glass."<sup>1152</sup>

Based on these observations, it seems most likely that it is Ghijsbrecht Donckere's *perpetuum mobile* which is depicted in the *Allegory of Hearing*. Textual evidence indicates his invention of such a device and his role at the court of the Archdukes in Brussels. His artful instrument "works and keeps going by itself" and as such makes no mention of the incorporation of a clock.<sup>1153</sup> The fact that this instrument is displayed among astronomical

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<sup>1150</sup> As Archduke Albert once requested from Antonini.

<sup>1151</sup> My guess is that the hand could be pointed at the water level at a given moment, in order to be able to compare and thus visualize the deviation over a certain period of time. Since this detail is so hard to make out, even after studying the painting up close in the Prado Museum, no definitive statements can be made.

<sup>1152</sup> Drebbel, *Een Kort Tractaet*, chapter 4; Van Werveke, "Gijsbrecht de Doncker," 235.

<sup>1153</sup> See note 1088.

clockwork devices in a painting dedicated to the sense of hearing supports the understanding of its function as a philosophical device, showing the moving force of the universe and at the same time underscoring its harmony. The concept of air pressure, and by extension the measurement of this pressure, seem to play no part in the debates surrounding this instrument at the time. Consequently, we cannot designate Donckere's instrument as a meteorological one, even though nowadays we can infer that it did function as both a barometer and a thermometer.

### Summary: motion and harmony

In the seventeenth century, the four Aristotelian elements were subjected to experimental verification. Cornelis Drebbel observed what he thought was the transformation of water into air, and the expansion and contraction of air under the influence of fire. Based on these findings, Drebbel constructed a *perpetuum mobile*, which displaced water in a glass tube without apparent cause. About a decade later, textual sources document the invention of a perpetual motion machine by Ghijsbrecht Donckere. The way he presented his device to various interested buyers reflects Drebbel's rhetoric. When an explanation of its application was given, the curious object was related to natural phenomena such as wind, rain, lightning and thunder.<sup>1154</sup> There are strong indications, however, that the actual cause of motion was partly known at the time, also at the court of the Sovereigns of the Spanish Habsburg Netherlands.

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<sup>1154</sup> Note that the document of 1619, which mentions storms at sea, was drawn up in Ghent, a city that is situated about 45 kilometers inland.

Both Daniello Antonini's explanation and the overall design of Donckere's *perpetuum mobile* reflect knowledge that changes in temperature were associated with changes in the volume of air. The phenomenon of atmospheric pressure, on the other hand, remains practically absent from contemporary reflections on the instrument's functionality. It was only in 1643 that Torricelli explicitly set out to construct an apparatus to show changes in air, while aiming to cancel out the effects of temperature. Even then several other realizations were needed before the connection could be made between the measured "weight of the air," in Torricellian terms, and changes in weather.<sup>1155</sup>

The mention that the liquid in Donckere's tube rose and fell twice daily indicates temperature and pressure changes caused by the heating of the air by the sun. These changes were indeed related to the density of air, but not to the transformation of the elements in the sublunary realm (in the Aristotelian sense) or to the tides of the sea, as they were conceptualized at the time. The remark that "an excessive ascent and bubbles"<sup>1156</sup> indicated a storm at sea, supposedly based on the observation of the water level of Donckere's *perpetuum mobile*, mainly seems to point to the search for a practical application for the apparatus.

The pictorial representation of Donckere's instrument in a painting devoted to one of the five senses reinforces its interpretation in terms of Aristotelian thought. The painted version of Donckere's *perpetuum mobile* is portrayed as an instrument that did not measure the temperature or the weight of the air. Instead of a mechanical explanation, the

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<sup>1155</sup> See note 1082. Usually Otto von Guericke (1602-1686) is credited with this realization, based on observing a water barometer that he built around 1654: "it is not perpetually in motion, but only as the weather changes in the whole of an extended region round about." However, von Guericke failed to notice the effect of temperature on his instrument, an effect that Torricelli had already mentioned. See Middleton, *The History of the Barometer*, 363–65; Michel, "The First Barometer," 92; von Guericke, *Experimenta Nova*, 100.

<sup>1156</sup> See note 1086.

instrument invited a philosophical engagement. The principle of the *primum mobile* was a key notion put forward by the *perpetuum mobile*. The instrument was thought to capture the self-moving force of the universe, thus providing a gateway to true knowledge of nature, and by extension an understanding of God. As a result, the *perpetuum mobile* simultaneously revealed the motions of nature and encouraged an investigation of the source of motion of the universe.

The placement of Donckere's device in the *Allegory of Hearing* as part of the collection of Archdukes Albert and Isabella, surrounded by their astronomical and philosophical clockwork instruments that symbolize the Harmony of the Spheres, provides us with a better picture of how the *perpetuum mobile* was understood at the time. The newly invented, mysterious object instantly became part of the culture of collecting at courts and among wealthy citizens, and inspired both mechanical and philosophical discussions.<sup>1157</sup> Today it is known that the continuous movement of the instrument was caused by fluctuations in temperature and air pressure. In the absence of knowledge of the barometric effect at the time, however, Donckere's device can only be defined as a barometer in retrospect.

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<sup>1157</sup> Von Prenner's print of the *Allegory of Hearing* [Fig. 80] of around 1730 only vaguely suggests the outline of the *perpetuum mobile*, which has taken on the shape of a clock. This might indicate that the instrument and its function were no longer known by then.

## 12 Metamorphoses and the Muses:

### Ovid's myths and van Mander's commentary

A Dutch translation of Ovid's *Metamorphoses* first appeared in Antwerp in 1552 (see chapter 5). The preface to Florianus' translation recounts that artists of the Antwerp Guild of Saint Luke repeatedly asked for a translation of Ovid's best-known work. The 1619 edition, for example, mentions: "*dat ghy Hooftman van der Schilders Camere sijt, daer veel cloecke ende constige geesten in sijn, soo vvel in Rhetorica als in Schilderijen, (die my tot den seluen menich-voeruen hebben versocht) op dat sy te meer volmaectheden door v soudan hebben.*"<sup>1158</sup> The dean of the rhetoricians and painters thus explained that a translation would benefit the artistic perfection of the guild members.

In addition, van Mander's *Het Schilder-Boeck* (Haarlem: 1604) included an *Wtlegghingh* or commentary on the *Metamorphoses* in the vernacular. Such publications significantly increased access to Ovid's histories, as evidenced by their frequent use as subjects of paintings. The myths also occur frequently in the constcamer genre [Appendix A]. Three entire constcamer compositions are based on Ovid's *Metamorphoses*, as well as at least seventy-eight pictures-within-pictures. This case study explores such references to Ovidian mythology included in the constcamer catalogue in general, and the role of the Muses in particular.

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<sup>1158</sup> Ovid, *Metamorphosis*, n.p. (translated by Florianus). My thanks go to John Tholen for pointing this out to me. For more information, see Tholen, "Ovidian Paratexts."

First, we will discuss the ways in which Ovid's *Metamorphoses* feature in constcamer paintings – either as the main theme or as a sub-theme. The importance of wonder will be emphasized, especially with regard to changeability. This will lead us to the Muses, both their conception in the early modern period and the ways in which they were pictorially represented. Lastly, the focus will be on the depiction of Ovid's Muses in constcamer paintings in order to deduce what their presence signifies within this genre. As will become clear, they rightly deserve a place in constcamer paintings, among other mythological scenes, since pictures of collections functioned as a means of both producing and storing knowledge and encouraging learning.

### *Metamorphoses* in the constcamer

One of the main features of constcamer paintings is the inclusion of paintings in the depicted collections (see chapter 9). A number of these pictures-within-pictures refer to stories from Ovid's *Metamorphoses*. About thirty-five themes from all fifteen books can be found in the constcamer dataset [Appendix C]. Among them are:

- Apollo and Daphne, Ceres and Stello, Pan and Syrinx, and Mercury and Argus (book 1),
- the rape of Europa, and Diana and Callisto (book 2),
- Diana and Actaeon, and Narcissus (book 3),
- Perseus and Andromeda, Danaë, Venus and Mars (and Vulcan), and Pyramus and Thisbe (book 4),
- the rape of Proserpina, Demeter and Ascalaphus, and Minerva and the Muses (book 5),
- Jupiter and Antiope, Leda and the swan, and Apollo and Marsyas (book 6),
- Cephalus and Procris (book 7),
- Bacchus and Ariadne, and the feast of Acheloüs (book 8),
- Hercules and Deianira (and Nessus), and Erichthonius (book 9),

- Venus and Adonis, the rape of Ganymede, Pygmalion and Galatea, and Orpheus charming animals (book 10),
- the judgement of Midas (book 11),
- Achilles and Hector (book 12),
- Polyphemus and Acis, and Achilles among the daughters of Lycomedes (book 13),
- Aeneas and Dido, and Vertumnus and Pomona (book 14), and
- the Phoenix (book 15).<sup>1159</sup>

These themes occur in two different ways within the genre: either as a sub-theme in one of the pictures-within-pictures, or as the main theme of an entire constcamer painting.

As the main theme

Achilles among the daughters of Lycomedes forms the central theme of a constcamer painting on three occasions [Cat. Nos. 30, 107, and 125].<sup>1160</sup> These variants closely resemble each other, and were all created by the workshop of Frans Francken II in the first half of the seventeenth century (see chapters 9 and 10).<sup>1161</sup> Ovid recounts the story of Achilles among the daughters of Lycomedes in book 13 as follows.

Achilles' Nereid mother [Thetis], who foresaw  
 his death, concealed her son by change of dress.  
 By that disguise Ajax, among the rest,  
 was well deceived. I [Ulysses] showed with women's wares  
 arms that might win the spirit of a man.  
 The hero still wore clothing of a girl,

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<sup>1159</sup> Ovid, *Metamorphoses*, books 1-15.

<sup>1160</sup> For a different treatment of these paintings, see Rosenthal, "Frans Francken the Younger's Discovery of Achilles," 704–29.

<sup>1161</sup> The main protagonist seems to be the version currently owned by the Louvre [Cat. No. 107]. An almost identical panel was auctioned by Sotheby's in 2007 [Cat. No. 30]. The third painting differs slightly in the detail, although the overall setup remains the same [Cat. No. 125]. Three more variants are documented by RKD Explore [Figs. 91, 92, and 93], as discussed in chapter 9.

when, as he held a shield and spear, I said  
 “Son of a goddess! Pergama but waits  
 to fall by you, why do you hesitate  
 to assure the overthrow of mighty Troy?”  
 With these bold words, I laid my hand on him—  
 and to: brave actions I sent forth the brave:  
 his deeds of Bravery are therefore mine  
 it was my power that conquered Telephus,  
 as he fought with his lance; it was through me  
 that, vanquished and suppliant? he at last was healed.<sup>1162</sup>

Achilles was in hiding at the court of Lycomedes on Skyros, an island in Greece, when Ulysses came looking for him. Initially deceived by Achilles’ appearance – he was dressed as a girl –, Ulysses managed to reveal his true identity by means of the precious gifts he presented to the daughters of Lycomedes. Only a boy would have an eye for weapons among women’s wares.

This theme had gained additional significance for artists because of references to it by Pliny the Elder and later Karel van Mander. In his *Naturalis Historia*, Pliny spoke of an ancient Greek painter named Athenion of Maronea who created “an Achilles also, concealed in a female dress, and Ulysses detecting him.”<sup>1163</sup> In turn, van Mander drew on Pliny when he wrote about the life of this same Athenion in his *Het Schilder-Boeck*.<sup>1164</sup> Creating a painting with this theme in the seventeenth century thus meant emulating the ancients. In

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<sup>1162</sup> Ovid, *Metamorphoses*, book 13, lines 98–204.

<sup>1163</sup> Pliny, *The Natural History*, 35.40.

<sup>1164</sup> Van Mander, *Het Schilder-Boeck*, part 2, fol. 75r. See also Sluijter, *De “Heydensche Fabulen,”* 83.

the constcamer paintings, the setting of the myth is transformed into a contemporary Antwerp interior, with the Palace of Coudenberg in Brussels visible through the archway on the far left, substituting the court of Lycomedes with the court of the Archdukes [e.g. Cat. No. 30].

As a sub-theme

The theme of Achilles among the daughters of Lycomedes also features as a picture-within-picture in *Alexander the Great Visiting the Studio of Apelles* [Cat. No. 34] by Willem van Haecht II.<sup>1165</sup> In this contemporary interior, the *Achilles among the Daughters of Lycomedes* [Fig. 85] by Anthony van Dyck (1599-1641) takes center stage on top of the mantelpiece.<sup>1166</sup> Several copies of this painting exist [Figs. 86 to 90], but the original was created by van Dyck in 1628 or 1629, during his stay in The Hague.<sup>1167</sup> As a result, these dates provide a *terminus post quem* for van Haecht II's constcamer painting [Cat. No. 34].<sup>1168</sup>

Interestingly, van Dyck created his painting of Achilles for Frederik Hendrik (1584-1647), Prince of Orange, who kept it at the Stadholder's residence in The Hague.<sup>1169</sup> According to an inventory from 1632, the painting depicting Ulysses discovering Achilles was

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<sup>1165</sup> This painting was auctioned by Sotheby's in 2010, and its main theme is obviously based on Pliny, *The Natural History*, 35.36. The constcamer painting strongly resembles van Haecht II' *Apelles Painting Campaspe* [Cat. No. 8].

<sup>1166</sup> About ten years earlier van Dyck was already involved in the production of a similar work, see Rosenthal, "Frans Francken the Younger's Discovery of Achilles," 711–12.

<sup>1167</sup> One of the copies was auctioned by Christie's in 2006 [Fig. 86]. Another one was auctioned by Dorotheum in 2014 [Fig. 87]. Dorotheum auctioned yet another copy in 2018 [Fig. 88]. A Dutch museum owns a slightly different version [Fig. 89]. Lastly, a similar version can be found in Germany [Fig. 90].

<sup>1168</sup> Previously the painting was dated ca. 1608-1637, the active period of van Haecht. See <https://rkd.nl/explore/images/50637> (accessed January 28, 2021).

<sup>1169</sup> More specifically, the so-called Mauritstoren at the Binnenhof. See <https://rkd.nl/nl/explore/images/19944> (accessed January 28, 2021).

located in the bedroom on top of a mantelpiece with (gilded) festoons, not unlike its placement in *Alexander the Great Visiting the Studio of Apelles* [Cat. No. 34].<sup>1170</sup>

A comparison of the two works, van Dyck's original [Fig. 85] with the picture-within-picture [Cat. No. 34], reveals only minor differences. Nine girls (including Achilles in disguise) come forward from a colonnade, accompanied by an elderly chaperone. On the right they are met by Ulysses and his companion Diomedes. The presence of a horse and the boy taking care of it can only just be made out. In between these two groups precious objects can be found strewn across the floor, as well as a dog. Deidamia, one of the daughters, can be identified as the girl flanked by two columns. She receives extra attention because of her white dress, even though this princess was not mentioned in the *Metamorphoses*.<sup>1171</sup> The girl drawing a sword can be identified as Achilles wearing a blue dress with a red cloak.

The only thing missing in the constcamer reproduction is the stick on which Ulysses or his companion is leaning. As a result it seems this man is raising his hand in a gesture of speech, slightly altering the nature of his response to the moment of recognition. Furthermore, the sky and the ground are both treated differently, and the overall impression is that the picture-within-picture is in a less cropped state than the original. Such variations are in line with the practices of copying that were common in seventeenth-century Antwerp, ranging from a greater or lesser resemblance to the original (see chapter 7).

Additionally, the constcamer painting [Cat. No. 34] depicts about five more pictures that refer to stories from Ovid's *Metamorphoses*. To the left of the mantelpiece the *Rape of Europa* (book 2) can be discerned in portrait format.<sup>1172</sup> On the right wall *Ceres and Stellio*

<sup>1170</sup> Drossaers and Lunsingh Scheurleur, *Inventarissen van de Inboedels*, 181.

<sup>1171</sup> Other sources that do refer to Achilles and Deidama include Ovid's *Ars Amatoria* and Statius' *Achilleid*. See Rosenthal, "Frans Francken the Younger's Discovery of Achilles," 706 (note 2).

<sup>1172</sup> Identified with the help of van Suchtelen and Van Beneden, *Kamers vol Kunst*, 130–31.

(book 5) can be found underneath *Alexander Banishing the Shoemaker*, which is based on Pliny's *Naturalis Historia*.<sup>1173</sup> To its right, a *Jupiter and Antiope* (book 6) can be identified, although this painting could also represent a *Venus and Cupid with a Satyr*. The *Drunken Silenus* in the upper right corner could refer to book 8 of the *Metamorphoses*. Lastly, in close proximity to the group of figures that depict Pliny's story of *Apelles Painting Campaspe* (see chapter 7), a small *Danaë* (book 4) is placed in the foreground. Myths about transformations are therefore ubiquitous in this painting.

## The wonder of transformation

The theme of Achilles among the daughters of Lycomedes provided an excellent opportunity for the display of a rich collection of objects, which according to the myth was presented at the court of King Lycomedes. One of his daughters "transforming" into Achilles was, moreover, a source of wonder. This notion of wonder (*thauma*) can be traced back to Aristotle's *Metaphysica* (see also chapter 4). According to Aristotle, "he who wonders and is perplexed feels that he is ignorant (*thus the myth-lover is in a sense a philosopher, since myths are composed of wonders*)."<sup>1174</sup> The *philomythos* or lover of myths is presented here as a *philosophos*, while the wondrous myths themselves are endowed with the ability to transform the ignorant into the wise.

Once the cause of a previously obscure phenomenon (e.g. the metamorphoses of Achilles) is understood, the feeling of wonder ceases to exist, and knowledge is acquired.<sup>1175</sup> Ignorance or want of perception (*agnoieo*) is thereby remedied. Van Mander's preface to his

<sup>1173</sup> Pliny, *The Natural History*, 35.36.

<sup>1174</sup> Aristotle, *Metaphysics*, 1.982b (my emphasis).

<sup>1175</sup> Hau, "One Might Rightly Wonder," 68; Aristotle, *Metaphysics*, 1.983a.

commentary on the *Metamorphoses* neatly illustrates how visual encounters and the act of seeing engender feelings of curiosity and the desire for knowledge (see chapter 5).

According to van Mander, the ancient poets and philosophers had deliberately disguised (“*onder uytmuntighe mom-cleederen bemantelt*”) their knowledge and wise teachings to arouse wonder among their followers (“*om anderen also oock greetigh en smaeck-lustigh daer toe te maken*”).<sup>1176</sup>

Van Mander’s commentary provides a contemporary key to understanding the higher meaning found in Ovid’s poetry at the time, and promised to bring up those hidden beautiful teachings from the dark *Chaos* to the light of *Phoebus* or Apollo [e.g. Fig. 187]. Van Mander thus set out to unlock the Church of the “*Sang-Godinnen oft Minervae*” in the vernacular.<sup>1177</sup> By the *Minervae* are meant the Muses, the pagan goddesses of knowledge and (artistic) inspiration. Both the Muses and Minerva were related to the mind, since the Muses were conceived by Mnemosyne (Memory) and Jupiter, while Minerva emerged from Jupiter’s brain [Fig. 170]. The knowledge associated with the Muses was honored and given a physical place in the form of shrines in classical antiquity (e.g. Plato’s Academy, Aristotle’s Lyceum, and the Alexandrian *Musaeum*), and in the form of cabinets of curiosities in the early modern period, which van Mander termed *const-camers* (see chapters 1 and 4).<sup>1178</sup>

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<sup>1176</sup> Van Mander, *Het Schilder-Boeck*, part 5, fol. \*3r. Van Mander used the Dutch verb “*verwonderen*” for wonder.

<sup>1177</sup> Van Mander, part 5, fol. \*4v. Original in Dutch: “*En dewijl het by ons ghemeen, en t'Schilders Bybel gheheeten was, om datter veel Historien uyt gheschildert wierden, hadd' ick wel over langh ghewenscht, de verclaringhe oft uytlegginghe daer neffens te sien, oft dat die verborghen schoon leeringhen uyt den donckeren Chaos tot den lichten Phoebum opgevoert hadden moghen worden, wachtende, en vast omsiende nae yemandt, die gheleert, onse spraek toeghedaeen wesende, hier toe lustigh en bequaem mocht wesen: maer hebbe onses Vlaemschen Casteleyns segghen al te waer bevonden, dat sulcker boesemen te vast ghesloten en toe gheknoopt zijn. Doch ick acht hun gheneghen tot hoogher voornemens, en dinghen die ons vreemt zijn, aenghelockt, en vervoert wesende, zijn niet sorgvuldigh met hun Achaische en Latische sleutelen ons, oft den Duytschen, der Sang-Godinnen oft Minervae Kerck yet t'ontsluyten.*”

<sup>1178</sup> Van Mander, preface, fol. \*4v.

It is striking that of the themes extracted from Ovid's *Metamorphoses*, that of Minerva and the Muses is among those occurring most frequently in the constcamer catalogue. Five unique representations of Diana and Actaeon, Perseus and Andromeda, Venus and Adonis, and Minerva and the Muses can be found as pictures-within-pictures. Some of those are reproduced more than once, such as the *Minerva and the Muses* placed on top of the cupboard in two of the constcamer paintings with Achilles among the daughters of Lycomedes as the main theme [Cat. Nos. 30 and 107]. The other representations of Minerva and the Muses can be found in constcamer paintings by Frans Francken II [Cat. No. 31], Willem van Haecht II [Cat. No. 55], and Jan Brueghel I and collaborators [Cat. Nos. 134 and 137]. In addition, the Muses accompany Apollo *Musagetes* in a judgement of Midas (book 11) as represented in the *Picture Gallery in the Former Palais Granvelle in Brussels with a Portrait of Pierre-Ferdinand Roose* [Cat. No. 47].

## Inventing the Muses

In his *Wtlegghingh*, van Mander devoted a significant part of book 5 to the Muses, or *Sangh-Goddinnen* (literally: song-goddesses). His explanation begins with the story of Minerva visiting the Muses on Mount Helicon. Knowledge of a new fountain or spring created by Pegasus had reached the goddess of wisdom.<sup>1179</sup> In Ovid the following can be read.

High on that mount [Helicon, haunt of the Virgin Nine]  
 she [Minerva] stayed her flight, and with these words bespoke  
 those well-taught sisters; "Fame has given to me

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<sup>1179</sup> "Van Pallas, oft Minerva" and "Van de Musae, oft Sangh-Goddinnen" in van Mander, part 5, book 5, fols. 42r–45r.

the knowledge of a new-made fountain—gift  
of Pegasus, that fleet steed, from the blood  
of dread Medusa sprung—it opened when  
his hard hoof struck the ground.—It is the cause  
that brought me.—For my *longing to have seen*  
this fount, *miraculous and wonderful*,  
grows not the less in that myself did see  
the swift steed [Pegasus], nascent from maternal [Medusa's] blood  
[...]

And Pallas [Minerva], after she had long admired  
that fountain, flowing where the hoof had struck,  
turned round to view the groves of ancient trees;  
the *grottoes* and the grass bespangled, rich  
with flowers unnumbered—all so beautiful  
she deemed the charm of that locality  
a fair surrounding for the *studious days*  
of those Mnemonian Maids [Muses].<sup>1180</sup>

This quote informs us that wonder (*thauma*) attracted Minerva to visit Mount Helicon and see the Hippocrene with her own eyes. The habitat of the Muses is characterized as full of caverns, as Pliny also described *musaea* (see chapter 4). The Muses themselves are said to be inquisitive or eager to learn (from *historia*).

Van Mander's commentary on the nine daughters of Mnemosyne is based on the writings of Pausanias (ca. 110-180 AD): their names – Clio, Melpomene, Thalia, Euterpe,

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<sup>1180</sup> Ovid, *Metamorphoses*, book 5, lines 250–340 (my emphasis).

Terpsichore, Erato, Calliope, Urania, Polymnia –, their respective inventions and practices, their underlying meaning, their associations with ancient poets, their alternative designations, and their function. The latter in particular can give us an insight into how the Muses were perceived at the beginning of the seventeenth century.

To this end, van Mander specifically cites Fabius Planciades Fulgentius (late 5<sup>th</sup>-early 6<sup>th</sup> century AD).<sup>1181</sup> According to Fulgentius, the Muses mainly bring about the desire to learn. This is closely related to the origin of the word Muses, for which van Mander gives three explanations. It could come from the ancient Greek *Môsthai* meaning to investigate or to learn (based on Plato), from *Meluse* referring to sweetness of singing or honey, or from *Homoeouses* or “joined together,” since all arts (*consten*) are related in the same way as sisters.<sup>1182</sup> Lastly the Muses were seen as the souls of the heavenly spheres, from whose nine voices the harmony of heaven was said to be born, thus referring to the concept of the Harmony of the Spheres [e.g. Fig. 223].<sup>1183</sup> The *Concert of the Muses* in the *Allegory of Hearing* [Cat. No. 134], for example, refers to universal harmony (see chapter 11).

It is interesting to note how van Mander paints a picture, as it were, of the Muses based on extracts from ancient sources. In this context, a brief detour to the art of oratory is called for (see also chapter 4). According to Cicero in his *De Oratore* of 55 BC, an orator is in

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<sup>1181</sup> Van Mander, *Het Schilder-Boeck*, part 5, book 5, fols. 43r–45r. Original in Dutch: “Fulgentius seght, dat de versieringhe deser Muses niet anders mede brengt, dan datmen voor eerst begheerigh moet zijn tot leeren: ten tweeden, ghenuechte moet nemen in dese begheerte: ten derden, vlijtigh zijn in t'ghene daer men zijn ghenuecht in heeft: ten vierden, volherden en vervolghen daer men vlijt in doet: ten vijfden, drucken in't ghedacht datmen heeft vercregen: ten sesten, wat vinden en voortbrengghen by t'ghene men in't ghedachte heeft: ten sevensten, overleggen en oordeelen t'ghene men gevonden heeft: ten achtsten, het beste kiezen van datmen gheoordeelt heeft: ten neghensten wel uytdrucklijck uyt spreken oft voortbrengghen t'ghene men ghekosen heeft.”

<sup>1182</sup> Van Mander, part 5, book 5, fol. 44v. *Homoeouses* probably refers to *Harmoge*, the ancient Greek term for a ‘fitting, joining agreement’, see Dundas, “Franciscus Junius,” 166.

<sup>1183</sup> Urania: sphere of the fixed stars, Polymnia: Saturn, Terpsichore: Jupiter, Clio: Mars, Melpomene: Sun, Erato: Venus, Euterpe: Mercurius, Thalia: Moon, Calliope: Earth. See van Mander, *Het Schilder-Boeck*, part 5, book 5, fol. 44v.

many ways similar to a poet.<sup>1184</sup> The fundamentals of rhetoric are *inventio*, *elocutio*, *dispositio*, *memoria* and *actio*, the first of which is linked to the production of knowledge.<sup>1185</sup> The act of invention was thought to be about selecting words to create an argument.<sup>1186</sup> This is reminiscent of Cicero's assumption that Zeuxis had used various elements of the five most beautiful maidens of Croton to create a painting of Helen of Troy, a woman who surpassed all others in beauty, in his *De Inventione* (see chapter 5).<sup>1187</sup> In a similar vein, van Mander "invents" the Muses in his commentary, which would subsequently be used by painters, among others, to create pictorial likenesses.

### Re-inventing the Muses

So how were the Muses actually depicted? Renaissance artists only had access to the surviving texts of the ancients, not to their pictorial tradition.<sup>1188</sup> But this did not prevent them from giving the Muses a visual form, so as to "re-invent" them. A famous example is Raphael's (1483-1520) fresco *The Parnassus* (1509-1511) [Fig. 34], which decorates one of the walls of the *Stanza della Segnatura* in the Apostolic Palace in Vatican City (see chapter 6).<sup>1189</sup> Marcantonio Raimondi (c. 1470/1482-1534) made an engraving after the design for

<sup>1184</sup> Cicero, *De Oratore*, book 1, 70–71. Available online via [http://pages.pomona.edu/~cmc24747/sources/cic\\_web/de\\_or\\_1.htm](http://pages.pomona.edu/~cmc24747/sources/cic_web/de_or_1.htm) (accessed February 1, 2021).

<sup>1185</sup> Kuwakino, "The Great Theatre of Creative Thought," 308.

<sup>1186</sup> Carruthers, *The Book of Memory*, 244. See also Cicero, *De Oratore*, book 2, 36–37 & 79–80. Available online via [http://pages.pomona.edu/~cmc24747/sources/cic\\_web/de\\_or\\_2.htm](http://pages.pomona.edu/~cmc24747/sources/cic_web/de_or_2.htm) (accessed February 1, 2021).

<sup>1187</sup> Dundas, "Franciscus Junius," 161–162.

<sup>1188</sup> Ancient images of the Muses in the form of sculpture, wall paintings, and mosaics would only resurface from the eighteenth century onwards, with the excavation of sites like Herculaneum and Pompeii. Think for example of the *Mosaic of the Muses from Vichten* (ca. 240 AD, excavated in 1995), nowadays on display in the National Museum of History and Art, Luxembourg. For an overview of painted depictions of the Muses dating back to classical antiquity, see Moormann, "Le Muse a Casa," 97–102.

<sup>1189</sup> The adjacent wall in the *Stanza della Segnatura* is decorated with Raphael's fresco *The School of Athens*, with the philosophers Plato and Aristotle as the central figures in the scene. Above this fresco we find the personification of Philosophy and the inscription *Causarum Cognitio* (Know the Causes). The ceiling tondo above *The Parnassus* shows a personification of Poetry accompanied by the words *Numine Afflatur* (Inspired by the Spirit).

the fresco that went into production about a decade later [Fig. 94]. In the center, we see Apollo as leader of the Muses (*Apollo Musagetes*) surrounded by the nine daughters of Mnemosyne and both contemporary and ancient poets. There is one striking difference between the engraving and the fresco: in the former Apollo holds the classical lyre, while in the latter the Olympic deity plays the contemporary *lira da braccio*. In a similar vein the attributes of the Muses differ in terms of time period.

It is likely that Raimondi's print was known in the Low Countries, since another engraving by his hand with the subject of the *Judgement of Paris* [Fig. 95] (again after Raphael) is prominently displayed in the constcamer painting *Alexander the Great Visiting the Studio of Apelles* [Cat. No. 34].<sup>1190</sup> Furthermore, one of the leading sixteenth-century Flemish artists, Frans Floris I (ca. 1519-1570), had travelled to Rome in the 1540s. His artworks would in the next century also be represented in several constcamer paintings [e.g. Figs. 201 and 202]. Floris designed his own variant of *Apollo and the Muses* (1565), which was printed by Hieronymus Cock (ca. 1510-1570). In the upper left corner of this engraving [Fig. 96] there is a list of the *Musarum Inventa*, the Muses and their findings or inventions.<sup>1191</sup> Nevertheless, it is rather hard to identify each of the Muses in the engraving, as they are equipped with contemporary musical instruments and other attributes.<sup>1192</sup>

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<sup>1190</sup> The print is held by the woman standing to the left of Campaspe. Many copies of this engraving have survived and are included in the collections of the Metropolitan Museum of Art in New York and the British Museum in London, among others.

<sup>1191</sup> Clio: *historiam* (history), Melpomene: *cantilenas* (songs), Thalia: *plamtaru artem* (dance), Euterpe: *tibias* (*aulos*), Terpsichore: *tripndium* (dance), Erato: *nuptialia* (marriage), Calliope: *poesim* (poetry), Urania: *astrologiam* (astrology), Polymnia: *agriculturam* (agriculture). Other versions of this engraving can now be found at the Museum of Fine Arts in Boston and the Harvard Art Museums in Cambridge.

<sup>1192</sup> We might be able to discern Clio, depicted in the act of writing history, and Euterpe with a variant of the *aulos* (an ancient Greek wind instrument that looks like a kind of flute) right behind her.

Van Mander's *Wtlegghingh* provides us with a different list of the inventions or arts associated with each of the Muses.<sup>1193</sup> Despite this specific knowledge, the Muses are not often depicted together while practicing their individual arts. Instead they are represented as a group of musicians, as can also be seen in an illustrated edition of Florianus' translation of the *Metamorphoses* into the vernacular of 1619 [Fig. 97]. Here we see a rendition of Minerva visiting the Muses on Mount Helicon. Minerva, easily recognizable by her helmet and lance, approaches the Muses, seated in a wooded landscape on the bank of a stream. Again it is hardly possible to discern their individual attributes.<sup>1194</sup> There is in fact no representation of this episode in ancient art, indicating that it is a purely early modern phenomenon.<sup>1195</sup>

The woodcut in *Metamorphosis dat is: die herscheppinghe oft veranderinghe* [Fig. 97] additionally shows six birds circling the air above Minerva's head. These could refer either to the Muses themselves, who escaped Pyreanaeus by flying away after he locked them up in his house, or, more likely, to the nine daughters of Pierus.<sup>1196</sup> They entered into a singing contest with the Muses, in whose name Calliope sings several learned songs, thereby taking over the narrator's voice for the remainder of book 5 of Ovid's *Metamorphoses*. The unjustified pride of the daughters of Pierus is punished and they are turned into magpies: "And thus new birds were added to the forest."<sup>1197</sup> Similarly, the birds in *Minerva's Visit to*

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<sup>1193</sup> Van Mander, *Het Schilder-Boeck*, part 5, book 5, fol. 43v. "Dese neghen hebben een yeder haer eyghen vindinge, oeffeninge oft Const: Clio, t'Helden-Boeck te schrijven: Melpomene, Truerspelen dichten: Thalia, cluchtspelen: Euterpe, de Pijpen: Terpsichore, de Harp, en de Clavesimbale: Erato, Vedel en Luyt: Calliope, ghedichten singen: Vrania, s'Hemels loop: en Polymnia, reden-rijck."

<sup>1194</sup> Based on van Mander's commentary, we can identify two depictions of Erato: one holding a lute and the other with a vielle (*Vedel*) or *lira da braccio* in her hand. Euterpe with the pan flute (*pijpen* rather than Floris' *aulos*) is placed just behind a Muse with a lyre, perhaps referring to a harp, who might then be Terpsichore.

<sup>1195</sup> Deckers, Moormann, and Schindler, "Musen," 205.

<sup>1196</sup> Van Mander explains that this story refers to Pyreanaeus trying to conjure up the appearance of wisdom, thereby hiding the emptiness of his ignorance. See van Mander, *Het Schilder-Boeck*, part 5, book 5, fol. 45r.

<sup>1197</sup> Ovid, *Metamorphoses*, book 5, lines 572ff. Van Mander equates the magpies with blasphemers who are ultimately disgraced. See van Mander, *Het Schilder-Boeck*, part 5, book 5, fol. 45r.

*the Muses* [Fig. 98], created in Antwerp in the first quarter of the seventeenth century, might be interpreted either as the Muses or as magpies. In addition, Pegasus features prominently in this painting as the creator of the spring “flowing where the hoof had struck” [see also Figs. 29 and 130]. The Muses play their concert accompanied by a wide variety of early modern musical instruments.<sup>1198</sup>

These four examples [Figs. 94, 96, 97, and 98] of “re-inventions” of the Muses depicted as a group of musicians primarily seem to emphasize the concept of harmony.<sup>1199</sup> As noted above, the Muses were sometimes associated with the Harmony of the Spheres.<sup>1200</sup> The heavenly music of the Muses was thus seen as an expression of cosmic harmony. Since they expressed themselves through poetry and song in Ovid’s *Metamorphoses*, the *Sangh-Goddinnen* are portrayed as a harmonious ensemble or choir holding music scores and instruments, sometimes of classical origin (e.g. lyre) and sometimes more recent creations (e.g. *lira da braccio*). The theme of Minerva visiting the Muses on Mount Helicon was especially popular among Antwerp artists (possibly initiated by Frans Floris I) in the late sixteenth and early seventeenth century.<sup>1201</sup> Because of this local interest it is not surprising that paintings with this subject also appear in constcamer paintings.

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<sup>1198</sup> Urania, with a kind of flute in her hand, is presumably the one addressing Minerva. As Ovid recounts: “And as she [Minerva] wondering stood, Urania, goddess of the Muse, rejoined;—‘Look, those but lately worsted in dispute augment the number of unnumbered birds [magpies]’.” See Ovid, *Metamorphoses*, book 5, lines 250–340. The other instruments that are being played are a flute, a lute, a *lira da braccio* or violin, a tambourine, an organ and a *viola da gamba* or bass violin. See also Mirimonde, “L’Hélicon,” 149. Behind the organ two of the Muses are reading music scores and singing.

<sup>1199</sup> No written instructions were given for the depiction of the Muses as a group. See also Ripa’s account of the Muses, which described only the characteristics of the individual Muses, in Ripa, *Iconologia*, 346–351.

<sup>1200</sup> idea goes back to Pythagoras, and is explained for instance by Pliny, *The Natural History*, 2.20. For its reception in Renaissance music theory, see Zarlino, *Le Istitutioni Harmoniche*, 101–103.

<sup>1201</sup> Mirimonde, “L’Hélicon,” 143.

## Achilles meets the Muses

When our attention is turned once more to *Achilles Discovered by Ulysses among the Daughters of Lycomedes* [Cat. No. 107], with *Minerva and the Muses* placed in the center on top of a cupboard, an attempt at interpretation in this pictorial context can be made.

Minerva is depicted to the right, emerging from behind the curtain that is pulled aside to reveal the painting. To her left we can discern at least six of the Muses who all focus their attention on the visiting goddess. Van Mander's commentary on the myth of Achilles at Lycomedes' court focuses on Ulysses, who by means of his scheme and keen perception helped recover Achilles from his girlish appearance, his delusion.

By returning to his true nature, revealed by his confrontation with "a shield and spear," Achilles could again act soundly and honestly, as opposed to giving in to a lustful life and his carnal desires.<sup>1202</sup> The protagonist subsequently decided to dedicate himself to noble deeds and leading a learned and fulfilling life.<sup>1203</sup> The shield and spear in the story of Achilles are reminiscent of the attributes of Minerva: a spear and a shield with the head of Medusa. The myth furthermore transforms Achilles from an ignoramus into a person eager to learn. As such he "unlocks the Church" of the *Minervae*, and harmony is restored. Associations of this nature abound between objects and themes depicted in constcamer paintings.

## Summary: perception and enquiry

Wonder encourages *philosophia*, the Greek word for philosophy that is literally translated as "love of wisdom." In the Aristotelian tradition, the senses (especially sight) were seen as the

<sup>1202</sup> "Van Achilles" in van Mander, *Het Schilder-Boeck*, part 5, book 5, fols. 95r–95v.

<sup>1203</sup> Also, at the end of Homer's *Odyssey* (ca. 8<sup>th</sup> century BC), together the nine Muses sing in mourning for Achilles. See Chatzivasiliou, "Mnémosyne, Mnémé, Memoria," 51.

means of acquiring knowledge (see chapters 4 and 13). The *musaeum* was perceived as a place of learning, and the cabinet or collection of curiosities equally inspired enquiry. Ovid's *Metamorphoses* can be understood as a collection of myths that are full of wonders. In the early seventeenth century, van Mander wrote a commentary in an attempt to unlock the higher meaning of Ovid's poetry. His *Wtleghingh* sheds light on the myths and the characters that occur in them. The texts by both Ovid and van Mander were subsequently used by artists to give pictorial form to the stories from the *Metamorphoses*.

The interiors represented in constcamer paintings are richly filled with objects and themes for the purpose of eliciting wonder. These pictures contain knowledge and trigger an associative learning process. Ovid's *Metamorphoses* appear frequently in constcamer paintings, either as the main theme of the painting or as a sub-theme in the form of a picture-within-picture. The theme of Achilles among the daughters of Lycomedes falls under both categories and can be interpreted in different ways, both as an emulation of the ancients and as an incentive to be faithful to one's nature. The latter is achieved by Ulysses when he exposed Achilles' disguise as a girl, revealing his true identity and transforming him into the hero who would go on to play a decisive role in the Trojan War. Universal harmony is thus restored, as symbolized by the Muses depicted near this scene [Cat. Nos. 30 and 107].

Among the myths of Ovid that are depicted in seventeenth-century constcamer paintings, the subject of the Muses occurs relatively often. Wonder drives Minerva to the grottoes of the studious Muses on Mount Helicon. Upon her arrival, one of the daughters of memory breaks into narrative poetic chant about competition and wisdom. This episode had no pictorial predecessor in ancient art and therefore embodies a new type of appropriation as well as representation. Although the classical attributes of the Muses were handed down from antiquity, there was no consensus among early modern artists, who often depicted the

Muses singing together accompanied by contemporary musical instruments. This is true for images originating from both south and north of the Alps, where the subject appears from the sixteenth century onwards. The story taken from the *Metamorphoses* became particularly popular in Antwerp with its thriving music culture, where the makers of musical instruments were members of the same Guild of Saint Luke as the painters (see chapter 7).

Several paintings of the Muses, of which the originals are not known, are depicted within the two-dimensional setting of constcamer paintings. Their inclusion in the *Allegory of Hearing* [Cat. No. 134], part of a series of the *Five Senses* that helped establish the constcamer as a genre within painting, is particularly significant. This *Concert of the Muses* [Cat. No. 134] conforms to the practice of representing the Muses in harmonious concert, appealing to the goddess of wisdom. There is no explicit reference to either Pyrenaeus or Pierus' daughters in this picture. Instead the nine sisters are represented as the Harmony of the Spheres, in accordance with contemporary notions of universal harmony.

As van Mander explained, "*t'Gedicht met de verheugende Sangh-const ghehouwt en vereenight, leerde alle wetenschappen en Consten.*"<sup>1204</sup> In other words, Ovid's poems together with the singing of the Muses taught all sciences and arts. Van Mander's *wetenschappen* and *consten* encompassed all branches of knowledge, and in his capacity as a painter, he first and foremost appointed painting as the natural nourisher of all of them (see chapter 8). His view that the arts of both painting and writing were grounded in the *Teycken-const* shows his affinities with the Paracelsian doctrine of *signatura rerum* and

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<sup>1204</sup> Van Mander, *Het Schilder-Boeck*, part 5, fol. \*3v. English translation: "the poem, married and united with the uplifting art of singing, teaches all sciences and arts." This idea goes back to, for example, Plato's *Phaedra* (ca. 370 BC), 267a. Here Plato remarked that the form of writings has an influence on memorization: hymns, stories, and philosophical lessons are supposedly easier to learn when they are in metric form. See Chatzivasiliou, "Mnémosyne, Mnémé, Memoria," 49.

Zuccaro's interpretation of *disegno* as a "sign of God" (see chapters 5 and 8).<sup>1205</sup> The arts and sciences are abundantly represented in constcamer paintings and testify that the desire to learn was visually stimulated by the wondrous collections on display.

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<sup>1205</sup> Van Mander, *Het Schilder-Boeck*, part 1, chapter 2, fol. 8v. Bacon would also speak of the of the "signets of the Creator" (see chapter 5).

## 13 *Scientifica* as aids to perception:

### early modern views on vision

This case study focuses on the depictions of *scientifica* or scientific instruments. The term is problematic because its current and historical meanings do not correspond. Nowadays scientific instruments are understood differently than in the seventeenth century. In general, our modern conception of science is not applicable to the early modern period in which “science” only emerged.<sup>1206</sup> Particularly the sixteenth and seventeenth centuries are characterized by the invention of instruments that advanced all branches of knowledge. The term knowledge is used here, because the Latin word *scientia* means knowledge.<sup>1207</sup> *Scientifica*, the plural of *scientificus*, in turn means making knowledge. *Scientifica* can thus be understood as things with which knowledge is produced.

Constcamer paintings constitute a source of knowledge about scientific instruments, of which the *perpetuum mobile* is an example (see chapter 11). First, the contemporaneous use of the term will be established, and then an overview will be provided of the representations of such objects in the constcamer catalogue. The *scientifica* can be roughly divided into measuring devices, optical instruments, and information artifacts. As can be inferred from both the terminology and the contexts in which *scientifica* are displayed, their function was mainly related to the acquisition of knowledge. This knowledge was

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<sup>1206</sup> Borrelli, Korey, and Remmert, “Introduction: Iconography on Scientific Instruments,” 1–2; Bolt, “Glass,” 4–5; Pisano and Bussotti, “How Science and Technique Work?,” 21.

<sup>1207</sup> <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0059:entry=scientia> (accessed February 11, 2021); Findlen, “Jokes of Nature,” 292. See also Kusakawa, “The Uses of Pictures,” 76.

understood to be twofold, consisting of both knowledge of the world and knowledge of oneself.

The five senses were assigned a prominent role in the acquisition of knowledge, in accordance with Aristotelian thought. The little studied constcamer painting *The Five Senses* [Cat. No. 131] is extremely interesting in this regard, especially since it contains one of the earliest representations of a telescope. This and other types of optical instruments could be used on the one hand to look with or through at the world, or macrocosm, and on the other hand to see yourself, the microcosm, and prompt reflection. In addition, pictorial proverbs will be cited to better illustrate the contemporary physical and metaphysical connotations of sight. This comprehensive account will contribute to the proposed interpretation of *scientifica* as vision aids within the seventeenth-century constcamer genre.

## Scientific instruments

The term *scientifica* was in use in some circles around 1600, most notably at the court of Rudolf II (1552-1612).<sup>1208</sup> The Holy Roman Empire included the Spanish Habsburg Netherlands as well as the Dutch Republic at the time. Rudolf II's *Kunstkammer* at Prague Castle was described by Karel van Mander as a “const-camer” in his highly influential *Het Schilder-Boeck*, published in Haarlem in 1604.<sup>1209</sup> In essence these and other *Kunstkammern* were the three-dimensional precursors of two-dimensional constcamer paintings. Rudolf II's collection was inventoried from 1607 to 1611 based on the categories of *naturalia* (natural specimens), *artificialia* (man-made objects, including works of art), and *scientifica*.<sup>1210</sup>

<sup>1208</sup> Bredekamp, *Antikensehnsucht und Maschinenglauben*, 63.

<sup>1209</sup> Van Mander, *Het Schilder-Boeck*, preface, fol. \*4v.

<sup>1210</sup> Fučíková, *Rudolf II and Prague*, 214 & 472; Kolb, *Jan Brueghel the Elder*, 54.

Because of the revival of antiquity, humanists were taught in the seven liberal arts in the early modern period. Within this framework, painting came to be seen as a liberal art, just as the ancient Greeks had done. According to van Mander, the art of painting was the natural nourisher of all virtuous arts and sciences (see chapters 8 and 12). Especially geometry (part of the *quadrivium*) elevated the art of painting, since this form of mathematics was at the basis of linear perspective (see chapter 9).<sup>1211</sup> *Scientifica* (e.g. the cross-staff) were furthermore created, and sometimes also used, by the same local scholarly and artistic community (e.g. the Coignet family), as discussed in chapter 8.

Over the last few decades, several attempts have been made to find a common denominator for the instruments that were created and used in the sixteenth and seventeenth centuries. Jim Bennett reintroduced the designation mathematical instruments in this regard. In his own words, “Adding the qualifier ‘mathematical’ does not restrict the class of instruments under consideration – in the terminology of the period, there are only mathematical instruments – but using it is a valuable reminder that these are not ‘scientific instruments’ in our broader sense. Neither, of course, are they ‘mathematical instruments’ in our narrower sense; that is, they are not just for drawing and calculation. They are for astronomy, surveying, navigation, warfare, architecture, gnomonics and so on, as well as for drawing and calculation.”<sup>1212</sup>

The term mathematics is derived from the ancient Greek word *mathema*, meaning learning or knowledge. Early modern mathematics, derived from an Aristotelian understanding of the term, included arithmetic, geometry, music and astronomy, in other

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<sup>1211</sup> De Munck and Ridder-Symoens, “Education and Knowledge,” 233 & 239–241; Filipczak, *Picturing Art in Antwerp*, 162.

<sup>1212</sup> Bennett, “Knowing and Doing in the Sixteenth Century,” 131; Bennett, “Early Modern Mathematical Instruments,” 697–98.

words the *quadrivium* [Fig. 300].<sup>1213</sup> Therefore, Bennett's mathematical instruments are equated in this study with the Latin term *scientifica*, used at the court of Rudolf II and understood as things with which knowledge is produced. The scientific instruments of the sixteenth and seventeenth centuries, as means to study the cosmos or universe before "science," could perform theoretical and practical functions. The following section will discuss the various instruments that belong to this category of objects and are represented in constcamer paintings.

### *Scientifica* in constcamers

One of the challenges of identifying early modern *scientifica* is that there was no commonly accepted terminology for the various instruments in circulation at the time.<sup>1214</sup> This was mainly the case for newly invented instruments, for which new names also had to be invented. In addition to Latin, which had been the *lingua franca* until the seventeenth century, the vernacular increased in popularity. The result is either a multitude of names for one instrument, or the use of the same name for different instruments. Moreover, its assigned meaning was not yet stable. Older instruments typically cause less confusion, since descriptions and denominations could be found in preserved texts such as Ptolemy's *Almagest*.<sup>1215</sup> The need for identification is of course a modern one, and both the Getty's Art

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<sup>1213</sup> <http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0057:entry=ma/qhma> (accessed February 11, 2021); Hobart, *The Great Rift*, 104. This understanding of the term is more encompassing than is desirable for our purposes when we think of musical instruments. However, the three-fold classification of music at the time differentiated between inaudible (mathematical or universal) music, concepts of physical and spiritual (human) harmony, and audible (instrumental) music (see chapter 11). Musical instruments are thus not understood as mathematical or scientific instruments.

<sup>1214</sup> See for example Molaro and Selvelli, "Early Telescopes," 193–208.

<sup>1215</sup> Even though the *astrolabon* described by Ptolemy is in fact an armillary sphere (and not an astrolabe). See Bud and Warner, *Instruments of Science*, 28 & 33.

& Architecture Thesaurus (see chapter 3) and the more specialized online catalogue of the Museo Galileo in Florence were used as the main guides in the annotation process.<sup>1216</sup>

### Measuring devices

Most of the scientific or mathematical instruments depicted in constcamer paintings fall under the heading of measuring devices [Appendix D.10], and have in common that their intended use is to measure something in the broadest sense [e.g. Figs. 180 and 181].<sup>1217</sup> The instruments designated as measuring instruments are the following:

- astrolabe,
- balance,
- beam compass,
- caliper,
- clock (a type of automated timepiece),
- compass with straight screw,<sup>1218</sup>
- compendium by Gillis Coignet (a specific timepiece),
- cross-staff,
- dividers,
- globe clock (a type of automated timepiece),
- gunner's level,
- gunner's quadrant (akin to a sector),
- Hood's sector (akin to a sector),
- magnetic compass,
- Mordente compass (akin to a sector),
- nautical compass,

<sup>1216</sup> <https://catalogue.museogalileo.it/index/IndepthIndex.html> (accessed February 3, 2021). Other resources used are Epact, an online database of scientific instruments created prior to 1600, <http://www.mhs.ox.ac.uk/epact/> (accessed February 3, 2021); Bud and Warner, *Instruments of Science*; Marr, *Between Raphael and Galileo*; Meskens, *Practical Mathematics*; Drake, Levere, and Swerdlow, *Essays on Galileo*; King and Millburn, *Geared to the Stars*.

<sup>1217</sup> This heading combines two hierarchies of Getty's AAT, namely "Measuring Devices" and "Tools and Equipment," both of which are included in "Furnishings and Equipment." See <http://vocab.getty.edu/page/aat/300207851>; <http://vocab.getty.edu/page/aat/300022238> (both accessed February 3, 2021).

<sup>1218</sup> As discussed in "Appendix C: Instruments of Urbino's Officina di strumenti matematici" by Marr, *Between Raphael and Galileo*, 235–38. On pages 235 and 237 reference is made to a "compass dalla vite diritta" or compass with a straight screw, used for precise measurements and possibly depicted in *The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73].

- *perpetuum mobile* (see chapter 11),
- perspective drawing instrument,
- proportional compass,
- quadrant,
- ruler,
- ruling pen,
- sandglass (a type of timepiece),
- sector,
- simple theodolite,
- square,
- sundial (a type of timepiece),
- surveying instrument,
- surveyor's compass,
- watch (a type of automated timepiece), and
- wing dividers (a variant of dividers).

These measuring devices [Appendix D.10] are discussed in more detail with reference to two allegories of sight, namely the *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84] signed by Jan Brueghel II and the *Allegory of Sight* [Cat. No. 17] signed by Jan Brueghel I (see chapter 10).

#### Sector and related instruments

As has been discussed in chapter 3, the sector is a proportional measuring device. The scales engraved on its two bars or arms are often impossible to make out in constcamer paintings, but the different appearances of the sector enable the identification of specific versions. In various allegories of sight, for example the *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84] of around 1660, a sector can be found lying on the floor amid a few other measuring devices. Those are a quadrant, a simple theodolite, and two surveying instruments that could not be specified further. A globe clock (see below and chapter 11) is furthermore placed on the left table. The sector in this constcamer is pictorially quite similar

to the one Giovanni Paolo Gallucci (1538-ca. 1621) illustrated in his *Della fabrica et uso di diversi stromenti di astronomia et cosmografia*, published in Venice in 1598 [Fig. 133]. The arms of the Gallucci type sector seem to characteristically end in points instead of flats.<sup>1219</sup>

Fabrizio Mordente (1532-ca. 1608) gained renown for his version of the sector, known as the Mordente compass. Mordente began working on such an instrument in 1567, and kept improving it in the following years.<sup>1220</sup> A third version of his sector [Fig. 134] appears in his treatise *Il Compasso del S. Fabritio Mordente con altri Istromenti Mathematici ritrovati da Gasparo suo fratello*, published in Antwerp in 1584.<sup>1221</sup> This instrument can be found in the *Allegory of Sight* [Cat. No. 17], painted in 1617 by court artists Jan Brueghel I and Peter Paul Rubens. This painting is the earliest dated of the *Five Senses* series, which represents the collections of Archdukes Albert and Isabella in five paintings – one per sense.<sup>1222</sup>

It is significant to note that the Michiel Coignet (see chapter 8) was an instrument maker and cosmographer in the service of the archducal court (seated in Brussels) from 1596 onwards.<sup>1223</sup> Coignet had a renowned library including foreign scientific literature, and might have been familiar with Gallucci's treatise of 1598, in other words with the Gallucci-type sector.<sup>1224</sup> Furthermore, Coignet wrote a treatise on the Mordente compass that appeared in no less than four languages.<sup>1225</sup> In all probability such an instrument was

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<sup>1219</sup> Some sources call this type "Guidobaldo's sector," after the one devised by Guidobaldo del Monte's (1545-1607), while other refer to it as the "Gallucci type sector." See Drake, Levere, and Swerdlow, *Essays on Galileo*, 18; Meskens, *Practical Mathematics*, 129–31. Filippo Camerota convincingly argued that Guidobaldo's sector is different from the Gallucci type sector. See Camerota, *The Geometric and Military Compass*, 44; Camerota, *Il Compasso Di Fabrizio Mordente*.

<sup>1220</sup> Hénin, "Early Italian Computing Machines," 207.

<sup>1221</sup> Camerota, *The Geometric and Military Compass*, 47.

<sup>1222</sup> See chapter 10 and Díaz Padrón and Royo-Villanova, *David Teniers*, 114–53.

<sup>1223</sup> Meskens, "Michiel Coignet's Contribution," 152.

<sup>1224</sup> Meskens, *Practical Mathematics*, 127–30.

<sup>1225</sup> His treatise appeared in Italian in 1608, in German in 1616 (Berlin), in Latin in 1624, and in French in 1626 (Paris). See Camerota, *The Geometric and Military Compass*, 52–53; Meskens, *Practical Mathematics*, 229–31.

constructed in Coignet's workshop in Antwerp,<sup>1226</sup> and it seems highly likely that one ended up in the collection of the Archdukes. As a result, the Mordente compass in the *Allegory of Sight* [Cat. No. 17] could have been pictured after an instrument made locally by Michiel Coignet after the design of his friend Fabrizio Mordente.

In addition, the *Allegory of Sight* shows two more variations on the sector. On the floor we can discern Hood's sector [Fig. 135], placed partly on top of an astrolabe.<sup>1227</sup> With his treatise *The Making and Use of the Geometricall Instrument, Called a Sector*, published in London in 1598, Hood informed the world about his invention.<sup>1228</sup> The second one is the gunner's quadrant not unlike the geometric and military compass [Fig. 136] of Galileo Galilei (1564-1642). Galileo published his invention in *Le operazioni del compasso geometrico et militare* (Padua: 1606). He had worked on the instrument from 1597 onwards and had knowledge of the gunner's sectors invented by Niccolò Tartaglia (1499-1557) in 1560.<sup>1229</sup>

Michiel Coignet was aware of Tartaglia's sectors and exchanged letters with Galileo.<sup>1230</sup> The learned and well-connected instrument maker and cosmographer to the Archdukes invented a sector himself called a *pantomètre*. In fact, Coignet used this term to refer to different instruments made by him and his workshop.<sup>1231</sup> Coignet's sector is illustrated in a Latin manuscript on the *regulae pantometrae* of around 1604 [Fig. 137]. According to the preface, Coignet presented this instrument to Archduke Albert,<sup>1232</sup> but unfortunately no corresponding representations of this particular measuring device could be

<sup>1226</sup> Camerota, *The Geometric and Military Compass*, 52.

<sup>1227</sup> Paolo Molaro and Pierluigi Selvelli called this device a folding rule, but also mentioned its resemblance with Hood's sector. See Molaro and Selvelli, "Early Telescopes," n.p.

<sup>1228</sup> Taylor, "Reconstructing Vernacular Mathematics"; Drake, Levere, and Swerdlow, *Essays on Galileo*, 17. A preserved sector, signed by Robert Becket and dated 1597, resembles Hood's sector. See Meskens, *Practical Mathematics*, 122.

<sup>1229</sup> Hénin, "Early Italian Computing Machines," 207–9; Camerota, *The Geometric and Military Compass*, 54.

<sup>1230</sup> Meskens, "Michiel Coignet's Contribution," 147 & 154; Meskens, *Practical Mathematics*, 199–200.

<sup>1231</sup> Meskens, *Practical Mathematics*, 131.

<sup>1232</sup> Meskens, "Michiel Coignet's Contribution," 152.

found in the constcamer catalogue. However, several of the surveying instruments that could not be specified further might actually be associated with Coignet, who excelled in trigonometry, or the method of triangulation used in surveying.<sup>1233</sup>

#### Surveying instruments

In the 1617 *Allegory of Sight* [Cat. No. 17], the constcamer that reproduces objects from the archducal collections related to the sense of sight, displays a semicircular surveying instrument in between the gunner's quadrant and Mordente compass. This instrument has been described as a theodolite or graphometer.<sup>1234</sup> As already mentioned, Brueghel II's *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84] depicts a simple theodolite. The term "simple theodolite" is used to distinguish this early, azimuth instrument that measures angles in a horizontal plane, from the modern theodolite, an altazimuth surveying instrument that measures angles both in a horizontal plane and of elevation.<sup>1235</sup> A simple theodolite made by Coignet in 1602 has been preserved in the Collection of Historical Scientific Instruments at Harvard University [Fig. 138], which is almost identical to the painted representation [Cat. No. 84].

The graphometer is a surveying instrument that can measure angles from zero to 180 degrees and can be used for triangulation.<sup>1236</sup> However, the graphometer is typically equipped with a magnetic compass, which seems to be absent from the instrument depicted in the *Allegory of Sight* [Cat. No. 17]. This instrument has some features in common with the two surveying instruments represented in *Allegory of Sight (Venus and Cupid in a Picture*

<sup>1233</sup> Meskens, *Practical Mathematics*, 14.

<sup>1234</sup> Molaro and Selvelli, "Early Telescopes," n.p.

<sup>1235</sup> Bud and Warner, *Instruments of Science*, 611–13.

<sup>1236</sup> <https://catalogue.museogalileo.it/indepth/Graphometer.html> (accessed February 11, 2021).

*Gallery*) [Cat. No. 84], namely the semicircular shape, fitting for a tripod, and sights through which observations can be made.<sup>1237</sup> The instruments depicted in the latter [Cat. No. 84] have been described as “a surveyor’s instrument, similar to a Mordente compass,” and “a Coignet surveyor’s sector like instrument.”<sup>1238</sup> In my view, these surveying instruments [Appendix D.10] are variations on the sector as developed by Coignet in his Antwerp workshop.

#### Coignet’s compendium

The *Allegory of Sight* [Cat. No. 17] displays a whole range of measuring devices in addition to the aforementioned versions of sectors. We can see an astrolabe, caliper, cross-staff, dividers, nautical compass, proportional compass, and two timepieces. The first of those is a sundial, the second an astronomical compendium. Incorrectly, this compendium has been identified as the nocturnal made by Michiel Coignet in 1602 [Fig. 139].<sup>1239</sup> Closer examination revealed that the timepiece represented here is actually the compendium made by Michiel’s father, Gillis Coignet the Elder (before 1526-1562/63) [Fig. 140].<sup>1240</sup> It is significant that such measuring devices are included in allegories of sight. Since the measurements are observed with the eye, they serve as extensions of human vision.

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<sup>1237</sup> An instrument fitted with sights is also called a diopter. <https://catalogue.museogalileo.it/indepth/Diopter.html> (accessed February 11, 2021). Coignet himself described a diopter, which is similar to a (simple) theodolite. See Meskens, “Michiel Coignet’s Contribution,” 154.

<sup>1238</sup> Meskens, *Practical Mathematics*, 131. Ad Meskens refers to a variant of the *Allegory of Sight (Venus and Cupid in a Picture Gallery)*, of which at least nine still exist today (see chapter 10).

<sup>1239</sup> Molaro and Selvelli, “Early Telescopes,” n.p. Images of this nocturnal were found in Turner, “A Novel Italian-Hour Nocturnal by Michiel Coignet.”

<sup>1240</sup> The compendium and its image were encountered in Meskens, *Practical Mathematics*, 12.

## Optical instruments

Aids to personal vision are furthermore depicted in constcamer paintings in the form of optical instruments [Appendix D.11]. Most of these instruments have the inclusion of one or more lenses in common.<sup>1241</sup> The instruments that are considered to be optical instruments are:

- eyeglasses,
- magnifying glasses,
- mirror,
- telescope, and
- suspended glass sphere.

One notable exception is the absence of the microscope in this enumeration. Not a single microscope is depicted in the constcamer catalogue spanning the entire seventeenth century.<sup>1242</sup>

The term eyeglasses, rather than spectacles, is used because the frames were not yet outfitted with sidepieces passing over the ears.<sup>1243</sup> The reflective surfaces of mirrors could be made of polished metal, especially in ancient and medieval times, but in Renaissance Antwerp were mainly produced by the same glass industry that manufactured the lenses for use in optical instruments. The framed pieces of glass can serve both decorative and “scientific” functions within constcamer paintings, depending on the context – hung on a wall, placed on a table, or held in the hand by a person.<sup>1244</sup> The suspended glass sphere is

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<sup>1241</sup> This heading makes use of Getty’s AAT hierarchy “Furnishings and Equipment”, of which “Optical Instruments” is a part. See <http://vocab.getty.edu/page/aat/300264551>; <http://vocab.getty.edu/page/aat/300024585> (both accessed February 4, 2021).

<sup>1242</sup> Galileo and Drebbel were early users of the microscope, but since magnifying glasses had been around for some time, the invention of this instrument “did not provide the novelty of a telescope.” Bolt, “Glass,” 5–6.

<sup>1243</sup> Compare “eyeglasses” and “spectacles” from the Getty’s AAT: <http://vocab.getty.edu/page/aat/300266808>; <http://vocab.getty.edu/page/aat/300236409> (both accessed February 4, 2021).

<sup>1244</sup> <http://vocab.getty.edu/page/aat/300037682> (accessed February 4, 2021). With many thanks to Michael Korey for the inspired discussions on early modern scientific instruments, including the mirror.

another product of the glass industry. The spherical surface reflects its surroundings, the constcamer [e.g. Cat. No. 6], in miniature and “captures what cannot be captured” [Fig. 195] (see chapter 5).

Historically, the study of optics with optical instruments is rooted in geometry, one of the subject areas of the *quadrivium*.<sup>1245</sup> Optical instruments are completely absent from the *Inscriptiones* of 1565, written by Samuel Quiccheberg at the Munich court and conceived as the first treatise on the ideal *Kunstammer* (see chapter 5).<sup>1246</sup> Based on inventories it is known that around 1600 eyeglasses were included in northern European collections, such as the Munich *Kunstammer*, the Ambras *Kunstammer*, and the Dresden *Kunstammer* (see chapter 6). This goes to show that they were considered objects worth collecting at the time. The interpretation of eyeglasses as collectibles, however, was susceptible to change. By the 1620s, the curator of the Dresden *Kunstammer*, Lucas Brunn, removed the eyeglasses from that collection.<sup>1247</sup>

Three pairs of eyeglasses can be found in the *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84], one of which is held upside-down by the monkey in the lower left corner. Ironically, the animal looks through these eyeglasses to study a painting depicting *Christ Healing the Blind*, perhaps alluding to the concept of “wrong” vision.<sup>1248</sup> Three more eyeglasses are on view in the *Allegory of Sight* [Cat. No. 17], two of them next to the proportional compass, and one held (but not used) by a monkey gazing at a painting depicting a *Marine* or seascape. In addition to the ordinary eyeglasses represented in the constcamer catalogue, there is one instance in which eyeglasses with colored lenses are

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<sup>1245</sup> Bolt, “Glass,” 7.

<sup>1246</sup> Quiccheberg, Meadow, and Robertson, *The First Treatise on Museums*.

<sup>1247</sup> Dupré and Korey, “Inside the Kunstammer,” 407–9.

<sup>1248</sup> On contemporary attitudes towards eyeglasses, see “The Influence of Spectacles” in Desborough, *The Changing Face*, 122–29.

depicted [Cat. No. 115]. The proximity of a Chinese padlock to these precursors of modern sunglasses might illustrate the prevalent use of such glasses in the Orient.<sup>1249</sup>

Two types of magnifying glasses can also be discerned in the allegories of sight by Brueghel I and II [Cat. Nos. 17 and 84]. The magnifying lens is placed either on top of a stand or is equipped with a handle. The proximity of coins and jewelry indicates its use for studying small items up close, while another version of *The Healing of the Blind Man* [Cat. No. 17] again alludes to the symbolic meaning and religious relevance of seeing. The repertoire of personal aids to vision was expanded around 1608, the year of the first written evidence of a telescope. In this textual source a spectacle maker from Middelburg, a town located approximately eighty kilometers northeast of Antwerp, applies for a patent for an instrument “with which one can see all things very far away as if they were nearby.”<sup>1250</sup> The term *telescopium* was coined only a few years later in Galilean circles, around 1612.<sup>1251</sup>

Two variants of the telescope are represented in the aforementioned allegories of sight [Cat. Nos. 17 and 84]. The first is a simple metal tube with a diaphragm visible at one of its ends.<sup>1252</sup> Contemporary sources inform us that Ambrogio Spinola, commander-in-chief of Archduke Albert’s army, witnessed a demonstration of the telescope at the peace conference in The Hague in September 1608. After reporting to the Archduke, court goldsmith Robert Staes (ca. 1560-1612/13) [Fig. 319] made two telescope tubes around May 1609.<sup>1253</sup> Such a tube may be depicted in the *Allegory of Sight* [Cat. No. 17] next to the monkey holding eyeglasses. Secondly, this constcamer painting displays a more elaborate

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<sup>1249</sup> Ilardi, *Renaissance Vision*, 127–28; Needham and Ling, *Science and Civilisation in China*, 121.

<sup>1250</sup> Zuidervaart, “The ‘True Inventor,’” 11.

<sup>1251</sup> Van Helden, *The Origins of the Telescope*, 3; Rosen, *The Naming of the Telescope*.

<sup>1252</sup> Zuidervaart, “The ‘Invisible Technician’ Made Visible,” 49.

<sup>1253</sup> Zuidervaart, “The ‘True Inventor,’” 16–17; Van der Stighelen and Bastiaensen, “The Sitters in a Family Portrait,” 756–765.

telescope consisting of several draw tubes placed on a stand. A similar variant, without stand, is shown mostly hidden underneath the simple theodolite in the later allegory of sight and its variants [Appendix D.11].

### Information artifacts

A different kind of looking is involved in the information artifacts depicted in constcamer paintings [Appendix D.12]. The scientific instruments under this header are the armillary sphere and globes or cartographic spheres, both celestial and terrestrial.<sup>1254</sup> Instead of being used to observe with or through, these instruments are intended to be looked at and convey knowledge recorded in the form of models of the earth and of the heavens. As a result, these spheres served as tools for observation and demonstration.<sup>1255</sup> The armillary sphere in the *Allegory of Sight* [Cat. No. 17] is depicted in great detail, with the zodiacal sign Leo just visible on the broad ecliptic band that represents the path of the sun in a Ptolemaic conception of the universe. This is not unique within the constcamer genre, on the contrary. All representations of armillary spheres collected in the constcamer dataset are geocentric, having the earth at its center.<sup>1256</sup>

The terrestrial globe in the *Allegory of Sight* of 1617 [Cat. No. 17] is accompanied by a nautical compass. The globe appropriately shows us the African continent surrounded by seas and tiny ships. The lines of latitude and longitude furthermore indicate that the sphere can be used as an aid to navigation and cartography.<sup>1257</sup> Just like the armillary sphere, the

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<sup>1254</sup> <http://vocab.getty.edu/page/aat/300230425> (accessed February 11, 2021). Books, for example, are also considered to be information artifacts by Getty's AAT, but are not included in my understanding of *scientifica*.

<sup>1255</sup> Bud and Warner, *Instruments of Science*, 28–31 & 286–88; Bennett, "Early Modern Mathematical Instruments," 698.

<sup>1256</sup> The alternative would be a Copernican armillary sphere, reflecting the heliocentric model of the universe with the sun at its center. Nicolaus Copernicus (1474-1543) first published his theory in 1543 (see chapter 11).

<sup>1257</sup> Bud and Warner, *Instruments of Science*, 287.

terrestrial globe is mounted in a cradle that permits rotation. The terrestrial sphere in the later allegory of sight [Cat. No. 84] and its variants is equally placed in a stand, but here a view of the landmasses on the map of the earth predominates, in line with the nearby land surveying instruments. This is, however, not the only terrestrial globe that is displayed in these constcamer paintings.

#### Globe and clock combined

On the far left [Cat. No. 84], a globe clock is placed on top of the table covered with Persian carpet. This globe clock is similar to the one owned by the Archdukes as represented among other timepieces in the *Allegory of Hearing* [Cat. No. 134], part of the *Five Senses* series (see chapters 10 and 11). This late sixteenth century object is a combination of several *scientifica*, and includes a magnetic compass, terrestrial sphere, celestial sphere, and clockwork mechanism [Figs. 141, 142, and 234].<sup>1258</sup> The globe clock is thus a timepiece as well as an information artifact, measuring device, astronomical instrument, and automaton in our modern understanding.<sup>1259</sup> Historically, the object also symbolized the Harmony of the Spheres (see chapter 11). These and other automated timepieces such as the clock and watch thus related not only to sight but also to (metaphysical) hearing.

#### Interim summary: meaningful realism

Most of the *scientifica* in the two constcamer paintings at the center of this section [Cat. Nos. 84 and 17] have the quality of being depicted after material objects, rather than relying

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<sup>1258</sup> With special thanks to Susanne Thürigen who confirmed that it is indeed a compass that is mounted underneath the terrestrial globes in extant globe clocks.

<sup>1259</sup> See some of the respective terms in the Getty's AAT: <http://vocab.getty.edu/page/aat/300196707>; <http://vocab.getty.edu/page/aat/300024497>; <http://vocab.getty.edu/page/aat/300231323> (all accessed February 3, 2021).

on preexisting images. The exceptions are Jan Brueghel II's terrestrial globe and the globe clock, the latter of which seems to reflect the Archducal timepiece [Cat. No. 134] only to some extent. So while the globe clock in the *Allegory of Hearing* can be construed as a portrait of a specific object, the other representations of globe clocks in the constcamer catalogue are types rather than portraits, derived from an object the painter had no longer direct access to. Given the family relationships, it is of course likely that artists such as Brueghel II and van Kessel I [Cat. No. 39] relied on preexisting images, painted or drawn by their (grand)father Brueghel I.

A wide variety of specializations (such as goldsmiths, engravers, glass and mirror makers) was involved in the production of actual scientific instruments, sometimes under the supervision of a cosmographer such as Michiel Coignet. Cosmography plays a significant role in this context, understood as the description of the universe from the ancient Greek *kosmographia*. Central to cosmography was the graphic representation of terrestrial and celestial realms,<sup>1260</sup> a “writing with ornaments” if you will. As such cosmography served a descriptive, rather than explanatory, purpose.<sup>1261</sup> Moreover, Coignet's field of expertise, trigonometry, is a branch of geometry, from the ancient Greek *geometria*, meaning to measure or survey the land or the earth.

The *scientifica* reproduced in constcamer paintings have in common that geometry is required to measure, view (geometrical optics) or model (projective geometry) the visible universe. It is through geometry that the early modern arts and sciences connect – both artists and scientists used their respective skills to map or represent the world. Artists such

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<sup>1260</sup> Cosgrove, “Images of Renaissance Cosmography,” 55–58.

<sup>1261</sup> “Cosmography combined astronomy, geography, surveying, navigation, cartography and instrumentation and concerned itself with the representation of both the heavens and the Earth, but unlike cosmology it did not deal with the natural philosophy of either.” Bennett, “Knowing and Doing in the Sixteenth Century,” 134.

as Jan Brueghel I created painted inventories of flora and fauna from 1594 onwards in order to establish a link between the *mundus sensibilis* and the *mundus intelligibilis* (see chapter 6). A representation of a *Garden of Eden* (1612-1613) by Brueghel I is even included in the *Allegory of Sight (Venus and Cupid in a Picture Gallery)* [Cat. No. 84]. This kind of retrospection is also characteristic for the included scientific instruments, since they reflect the state of the art of around 1600, when many new instruments were invented.

The latest scientific developments are reflected in early constcamer paintings and continued to play a role within the genre for the remainder of the seventeenth century. The sector in all its diversity is extensively documented in constcamer paintings. This demonstrates the local prominence of Michiel Coignet and his workshop as well as its influence on the painterly genre. The association of *scientifica* mainly with the sense of sight [Cat. Nos. 84 and 17] puts them forward as aids to vision. The naturalistic representations of “things with which knowledge is produced” in constcamer paintings can be interpreted as symbolic of the expansion of human vision, thus helping to expand existing worldviews.

## The significance of the telescope

Much attention has already been paid in the previous chapters to the importance of the senses, and to the influence of Aristotelian philosophy as reflected, for example, in a synoptic table [Fig. 251] by members of the Antwerp Guild of Saint Luke, and taught at the University of Leuven, among other places. One constcamer painting in particular [Cat. No. 131] illustrates this body of thought *par excellence* and will be analyzed in depth in this section. After a formal analysis of the artwork, the included *scientifica* will be placed in broader contexts to determine the meanings of the represented optical instruments more

accurately. Ultimately *The Five Senses* is an ode to the art of painting and the sense of sight, which allows one to appreciate works of art and come to insights.

### *The Five Senses*

*The Five Senses* [Cat. No. 131] is currently in the collection of the Musée Magnin in Dijon. This constcamer painting is executed in oil paint on a thinned oak panel with the humble dimensions of 23.5 by 37.7 centimeters. It was acquired before 1922 by Maurice Magnin (1861-1939), unsigned and undated. Initially attributed to Marten de Vos in 1923, the painting was identified as “Flemish school, 17<sup>th</sup> century” by 1938.<sup>1262</sup> Two other Antwerp painters are currently also associated with *The Five Senses*, namely Louis de Caullery and Frans Francken II.<sup>1263</sup> Furthermore, two anonymous paintings [Cat. Nos. 50 and 99] loosely based on *The Five Senses* and of lesser quality exist and were auctioned in Munich (2013) and Paris (2008), respectively (see chapter 9).

Five women, each personifying one of the senses, are depicted on the left of the panel of *The Five Senses* [Cat. No. 131]. Sight is holding a mirror in her hand, while opposite her a painted portrait of *Sight* is placed on the ground. The hand of Taste rests on the picture frame, while she holds a piece of fruit in her other hand. She looks up to Smell, who presses a flower against her nose. Hearing is playing a lute, her usual attribute. Although previously unrecognized, Touch is most certainly represented on the far left dressed in

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<sup>1262</sup> According to the label on the back of the painting’s frame. Jeanne Magnin’s attribution of 1923 is based on similarities with Marten de Vos, *Apollo and the Muses* [Fig. 119]. I am very grateful to Sophie Harent (director of the Musée Magnin) and Hélène Isnard (documentalist at the Musée Magnin) for letting me study the work in person and for sharing their catalogue records with me.

<sup>1263</sup> Presumably the artwork was created after Louis de Caullery (so perhaps by his studio or entourage) or in the manner of Frans Francken II. See <https://www.pop.culture.gouv.fr/notice/joconde/50110001650> (accessed February 11, 2021).

yellow.<sup>1264</sup> She points her left index finger to her right arm, on which we can only just discern two little birds.

These five senses are placed in a shallow space with five paintings mounted on the walls, one for each of the four elements and a banquet of gods in the middle. The frames of the four elements are inscribed with their Latin names, from left to right: “*Ignis*” for *Fire* (with salamander), “*Aqua*” for *Water* (with reeds), “*Aer*” for *Air* (with clouds), and “*Terra*” for *Earth* (with cornucopia, also known as the horn of plenty). In the middle a banquet scene can be found, with Bacchus (with barrel) on the left, Ceres (with wheat) on the right, and Venus (with waist buckle) in the middle. This scene refers to the proverb *Sine Cerere et Baccho Friget Venus* [Fig. 171]. In other words: “Without Ceres and Bacchus, Venus would freeze” [Appendix D.6].<sup>1265</sup> A satyr and Cupid are visible in the background, flanking Venus.

Two more paintings are placed on the floor. An unframed painting on canvas, stretched with nails onto a wooden frame, depicts a mountainous landscape with tiny figures. The second one, in the foreground with an elaborate frame, shows an artist seated behind his easel in the process of painting the likenesses of Venus (again with waist buckle) and Cupid (with arrow), who are sitting for him. The frame is leaning against a table, on top of which a display cabinet or *kunstkast* [Appendix D.2] has been placed.<sup>1266</sup> This object of typical Antwerp production contains tiny cabinet paintings of mythological (nude) scenes mounted on its doors and drawers. Jewelry and some coins lie scattered on the table and

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<sup>1264</sup> Touch was formerly identified as the woman playing the lute, while Hearing (dressed in yellow) was thought to be singing. See Georgel and Lecoq, *La Peinture dans la Peinture*, 270; Asemissen and Schweikhart, *Malerei als Thema der Malerei*, 136; Borel, *Le Peintre et son Miroir*, 87–88; Cariel and Desgranges, *La Musique*, 3.

<sup>1265</sup> Melion, “Goltzius’s ‘Sine Cerere et Libero Friget Venus,’” 144–45; Diez del Corral, “Sine Cerere et Libero, Venus Friget,” 1–31.

<sup>1266</sup> Baadj, “Collaborative Craftsmanship,” 271.

pour out of one of those drawers, and the top of the display cabinet is crowned with two statuettes.<sup>1267</sup>

Two Spanish chairs are propped up against the two walls that are covered by patterned hangings. The way in which the interior is depicted, and the furniture placed in it, indicate a certain disregard for the right perspective of the space, which has been constructed clumsily and without much illusion. Centrally placed against the back wall, a cupboard featuring three lion's heads and a classical pilaster can be found. On top of it, distributed over two levels, a bouquet of flowers in a vase can be discerned, as well as a piece of metalwork crowned by the figure of Minerva, a drinking glass, three fragments of sculpture (a male torso seen from behind,<sup>1268</sup> a frontal female torso, and a bust), and a statuette of *Apollo* with a lyre, wearing a laurel wreath and leaning against a tree trunk.

What remains to be discussed is the foreground. Here a monkey, chained to a large ball, sits up looking straight at us. To the left of the animal, two objects lying on the floor deserve extra attention: a pair of glasses and a round tube. This tube has previously been interpreted as a *traverso*, a baroque type of flute.<sup>1269</sup> It is noticeable, however, that no finger holes are visible on the tube. In addition, the sheen of the tube is similar to the frame of the pair of glasses, ball and chain, and the metalware on top of the cupboard. This seems to indicate a type of metal. Baroque flutes are known to have been made of wood, so this certainly rules out the idea that a *traverso* is meant to be represented here. The other characteristics of the tube – the small hole at its very end and a possible tripartite division – suggest a completely different object: the telescope.

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<sup>1267</sup> Presumably a crouching *Venus* and a standing *Cupid*.

<sup>1268</sup> Reminiscent of the *Belvedere Torso* [Fig. 143].

<sup>1269</sup> Cariel and Desgranges, *La Musique*, 3. Here we read: "*Le traverso (petite flûte traversière baroque) posé au sol indique que le silence est l'un des composants de l'ouïe.*"

## Early telescopes and their representations

The telescope emerged around 1608. Hans Lipperhey, a spectacle maker from Middelburg, is usually credited with its invention, based on a patent application dating from 25 September of that year (see above).<sup>1270</sup> But Huib Zuidervaart has convincingly argued that this archival source does not necessarily mark the invention of the telescope, a device that “must have been around for some decades” by then.<sup>1271</sup> It is quite puzzling though why the telescope did not emerge earlier, especially since all the necessary parts seem to have been available at hand for some time already. It took expert lens grinding and polishing, on the one hand, and the right combination of lenses and distances between them, on the other. The addition of the diaphragm at the objective end may very well have been the key to the creation of a practical instrument that could enlarge two to three times.<sup>1272</sup>

Early seventeenth-century telescopes had a convex objective lens, and a concave ocular lens. The former had a focal length not exceeding 50 centimeters, while the latter had a focal length not exceeding 20 to 30 centimeters.<sup>1273</sup> The lenses used were spectacle lenses placed within a tube of consequently small diameter, with a total length of about 60 centimeters. Spectacle makers responsible for the production of lenses abounded in and around Middelburg. Originally Antwerp was home to one of the most significant glass industries of northern Europe. As early as 1442, glass and mirror makers were included in the guild of Saint Luke, and the production of nearly colorless glass emerged in Antwerp in

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<sup>1270</sup> Van Helden, *The Origins of the Telescope*, 2–3.

<sup>1271</sup> Zuidervaart, “The ‘true inventor,’” 10.

<sup>1272</sup> See Willach’s “The long road to the invention of the telescope” in Van Helden, 93–114; Dupré, “Galileo, the Telescope, and the Science of Optics,” 276; Bucciantini, Camerota, and Giudice, *Il Telescopio di Galileo*, 10. I am most grateful to Marvin Bolt and Michael Korey for the many exchanges on this subject.

<sup>1273</sup> Dupré, “Galileo, the Telescope, and the Science of Optics,” 276.

1537.<sup>1274</sup> The city's first workshop for glass mirrors opened in 1542, while in 1581 Govaert van der Haghe from Antwerp established a rival glass industry in nearby Middelburg.<sup>1275</sup>

In the first half of the seventeenth century, the telescope also appeared in artworks.<sup>1276</sup> Notable examples are a number of paintings [e.g. Figs. 144 and 145], similar in style and subject, currently attributed to David Vinckboons I (active in Amsterdam from 1591 to 1629). These four paintings and a sketch [Fig. 146] are known as *Allegory of the Five Senses, or Elegant Company in a Garden*, but given the absence of date or signature they offer little guidance.<sup>1277</sup> Another remarkable example is the *Extensive Landscape with View of the Castle of Mariemont* [Fig. 147], on display in the Virginia Museum of Fine Arts in Richmond (VA).<sup>1278</sup> This painting by Jan Brueghel I is dated around 1609, relatively close to Lipperhey's patent application.<sup>1279</sup> In it, Archduke Albert himself holds a telescope to take a closer look at his surroundings.

What these paintings demonstrate is how to look through a telescope. While Albert holds the eyepiece close to his right eye, the figure in Vinckboons' *fête galantes* maintains a distance of about 10 centimeters. This helps us to notice the diaphragm through which the

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<sup>1274</sup> Ilardi, *Renaissance Vision*, 141–43. Venice was renowned for its production of *crystallo*, a tough, colorless and transparent type of glass, and a patent to produce such glass *à la façon de Venise* in Antwerp was acquired in 1558. See Ritsema van Eck, *Glass in the Rijksmuseum*; Dupré, "Trading Luxury Glass," 57.

<sup>1275</sup> As a result of the occupation of Antwerp by the Spaniards in 1585, many artisans migrated north. In addition, highly skilled workers were secretly solicited to go to London and Middelburg. See Dupré, "Trading Luxury Glass," 57; Veeckman and Jennings, *Majolica and Glass*, 155–56.

<sup>1276</sup> So-called sighting tubes, the predecessors of the telescope, can already be found in manuscript illuminations. An interesting selection from the eleventh to the fourteenth centuries is brought together in Michel, *Images des Sciences*, 96–104.

<sup>1277</sup> See <https://rkd.nl/explore/images/265416> [Fig. 144] (same as <https://rkd.nl/explore/images/276011>); <https://rkd.nl/explore/images/278563>; <https://rkd.nl/explore/images/282904> [Fig. 145]; <https://rkd.nl/explore/images/3314>; <https://rkd.nl/explore/images/46237> [Fig. 146] (all accessed February 4, 2021). A similar sketch is partly reproduced in Zuidervaart, "The 'Invisible Technician' Made Visible," 58.

<sup>1278</sup> Paolo Molaro and Perluigi Selvelli presented on this topic at several conferences in 2009. For the most extensive conference proceedings, see Molaro and Selvelli, "Early Telescopes."

<sup>1279</sup> This dating is possible because of the known building history of the Castle of Mariemont, reflected in several successive paintings by Jan Brueghel I. See <http://www.janbrueghel.net/object/landscape-with-archduke-albert-and-mariemont-castle> (accessed February 4, 2021).

sense of Sight is looking [Figs. 144 to 146]. Also worth noting is that the length of the tube roughly corresponds to the 60 centimeters mentioned above. In both instances the tube is made from metal, the material most used for telescope tubes in the Dutch Republic.<sup>1280</sup>

With regard to the Spanish Habsburg Netherlands, it is documented that court goldsmith Robert Staes made two telescope tubes around May 1609, after Ambrogio Spinola had witnessed a demonstration of such a device at the peace conference in The Hague in September 1608.<sup>1281</sup>

Early telescopes, described as *perspectivische prillen* or *perspicilla*, were mentioned in the 1619 inventory of the Dresden *Kunstammer*.<sup>1282</sup> This signals an interest among collectors in the latest innovations in the fields of optical knowledge and instrumentation. Similarly, representations of telescopes connote recent achievements in the realm of scientific investigation. In Jusepe de Ribera's *Allegory of Sight* of 1615-1616 [Fig. 148], a telescope is held by the personification of Sight as a symbol of the informed or keen eye.<sup>1283</sup> Sight is usually designated as the first of the five senses, because "of all the senses sight best helps us to know things."<sup>1284</sup>

The hierarchy of the senses is marked on a series of drawings representing the five senses [Figs. 161 to 165]. The first of the "5 sinnen" is the sense of *Sight* [Fig. 161] with an eagle at her feet. Second is the sense of *Hearing* [Fig. 162], playing the lute and singing together with others. Next is the sense of *Smell* [Fig. 163], who wears a Brabantine *huik* and

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<sup>1280</sup> Zuidervaart, "The 'Invisible Technician' Made Visible," 49. A very different tube can be seen in Ribera's *Sight* [Fig. 148] of ca. 1615-1616. See Madrid Casado, "The Depiction of Science," 115; Vázquez Manassero and Vázquez Alonso, "Ciencia y Arte Se Encuentran."

<sup>1281</sup> Zuidervaart, "The 'True Inventor,'" 16-17; Honig, *Jan Brueghel*, 66.

<sup>1282</sup> Dupré and Korey, "Inside the *Kunstammer*," 409-10 & 418. On the terminology for early telescopes, see Molaro and Selvelli, "Early Telescopes," note 2.

<sup>1283</sup> Vázquez Manassero and Vázquez Alonso, "Ciencia y Arte Se Encuentran," 204-6; Molaro, "Francesco Fontana and the Birth of the Astronomical Telescope," 284-86.

<sup>1284</sup> Aristotle, *Metaphysics*, 1.980a.

brings a bouquet to her nose.<sup>1285</sup> *Taste* [Fig. 164] also wears a *huik* and carries a tazza with fruits in her left, and an apple in her right hand. At her feet a monkey can be discerned. Lastly *Touch* [Fig. 165] wears a *huik* and has turned her back to us. She holds a bird in her hand and is accompanied by a turtle at her feet. Unfortunately, this series of drawings is not dated, but based on the clothing it can be situated in the early seventeenth century in the Duchy of Brabant, perhaps even in Antwerp [e.g. Fig. 179].

The first dated depiction in a painting

The first dated representation of a telescope in paint can be found in Brueghel I's *Air* [Fig. 317] made in collaboration with Hendrik van Balen I in 1611. The telescope depicted in this painting has previously gone unnoticed. It was thought to be included first in the allegory of *Air or Optics* of 1621 [Fig. 316], created for Brueghel's patron Cardinal Federico Borromeo.<sup>1286</sup> A telescope can nevertheless also be discerned in the *Air* signed and dated "Brueghel 1611," the last in a series of the four elements presumably created for the Archdukes.<sup>1287</sup> The personification of Aurora or Urania (the Muse of astronomy) holds feathers and a bird-of-paradise in her left, and an armillary sphere in her right hand. Next to the armillary sphere, partly covered by her right arm, a telescope is visible, to which an eagle turns its intense gaze [Fig. 318]. In the 1621 *Air or Optics* a putto uses a similar telescope to look at the moon represented by Diana in a chariot. This is perhaps a reference to

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<sup>1285</sup> The sketchy outline on the bottom right suggests the shape of a dog.

<sup>1286</sup> The telescope was thought to be "absent from [...] the earlier versions of the allegory" (i.e. made before 1621), according to Rikken and Smith, "Jan Brueghel's Allegory of Air," 94.

<sup>1287</sup> This assumption is based on the provenance, which indicates that the painting was in the collection of Archduke Leopold Wilhelm in 1659. <https://www.janbrueghel.net/object/allegory-of-air-lyon;> <https://rkd.nl/explore/images/8042> (both accessed May 11, 2021).

Borromeo's own telescopic observations intended to confirm or refute the astronomical discoveries presented in Galileo's *Sidereus Nuncius* of 1610.<sup>1288</sup>

*Perspicilla* in constcamers

Another excellent source for representations of telescopes is the genre of constcamer paintings [Appendix D.11]. One of the most iconic examples is the *Allegory of Sight* (1617) [Cat. No. 17], part of the *Five Senses* series (see chapter 10).<sup>1289</sup> The series represents the collection of Archdukes Albert (younger brother of Rudolf II) and Isabella (daughter of Philip II of Spain), Sovereigns of the Southern Netherlands between 1598 and 1621. Their collection is ordered according to the Five Senses, grounded in the Peripatetic axiom that "nothing is in the intellect that was not first in the senses."<sup>1290</sup> The *Allegory of Sight* displays two telescopes of different types, the earliest dated examples within the genre.

The first is a simple metal tube lying on the floor, the second a more elaborate example consisting of several draw tubes placed on a stand [Cat. No. 17].<sup>1291</sup> As Marvin Bolt and Michael Korey have successfully demonstrated, the latter is not an early "Keplerian" telescope, which makes use of two convex lenses in longer tubes, but one equally constructed by means of a convex and concave lens as outlined above, also known as the "Galilean" type.<sup>1292</sup> The simple metal tube is reminiscent of the telescope represented in the Musée Magnin's *The Five Senses* [Cat. No. 131]. In this image the two aids to personal vision, eyeglasses and telescope, are placed in direct relation to each other and have approximately

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<sup>1288</sup> See Van Helden's "Galileo and the telescope" in Van Helden, *The Origins of the Telescope*, 183–201; Strano, *Galileo's Telescope*, 45–58; Strano, "Galileo's Telescope," 25–28; Bucciattini, Camerota, and Giudice, *Il Telescopio di Galileo*, 183–98.

<sup>1289</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 112–25.

<sup>1290</sup> This quote refers to Aristotle's *De Anima*, 3.432a8 (see chapter 7).

<sup>1291</sup> The former is depicted just behind Cupid's legs, the latter in between the two figures.

<sup>1292</sup> Bolt and Korey, "Dioptrice," 274. For the articles making claims about "Keplerian" telescopes, see note 1278 and Molaro and Selvelli, "Early Telescopes," n.p.

the same diameter. This seems to point to a similarity in parts of the eyeglasses and the telescope.

#### Implications and considerations

The novelty of the inclusion of a telescope and eyeglasses, and the implicit link between them, in *The Five Senses* [Cat. No. 131] depends almost entirely on its date. The same is true of the place of this constcamer painting within the genre. Currently a period of creation between 1575 and 1625 is suggested, in the absence of a definite date and attribution. This makes three scenarios possible.

1. One of them is that *The Five Senses* was created before 1608. This would mean that this constcamer painting would be one of the first examples of the genre.  
  
Furthermore, it would mean that we have visual evidence of the existence of a telescope in or near Antwerp before its first documentation in writing.
  
2. A second possibility is that the painting was created between 1608 and 1617, the year in which Brueghel and Rubens completed and signed the *Allegory of Sight* [Cat. No. 17]. In this case the latter may have been informed by *The Five Senses*.<sup>1293</sup> This could still be one of the earliest depictions of a telescope, one which moreover provides the viewer with hints about its construction.

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<sup>1293</sup> Interestingly the *Allegory of Sight* (1617) also includes a representation of the proverb *Sine Cerere et Baccho friget Venus* (above the portal), attributed to Titian at the time [Fig. 156].

3. Lastly, *The Five Senses* may have been created after 1617. This scenario would call into question the degree of originality of the composition. By then the genre of constcamer paintings was already well established, and we are aware of many earlier dated representations of early telescopes.

Based on stylistic analysis and the abundant references to classical antiquity, an early rather than late date seems plausible. And although the creator is not known, there are some clues to the sources of inspiration, especially in relation to the pictures-within-picture.

The series of the four elements, displayed as paintings on the walls, is reminiscent of Marten de Vos' series *The Four Elements* [Fig. 152 to 155]. This series was designed by de Vos, and engraved and published by Jan Sadeler I. Although not exact copies, the main features of the prints can easily be recognized in *The Five Senses*. In the lower left corner of *Fire*, for example, a salamander on a bed of flames can be discerned. *Air*, on the other hand, is characterized by clouds sprouting out of her head instead of hair. Traces of influence by Marten de Vos can further be recognized in the lute and lute player in *The Five Senses*. A similar representation can be found in de Vos' *Apollo and the Muses* [Fig. 119], as noted by Jeanne Magnin in 1923.<sup>1294</sup>

Furthermore, the inclusion of the theme of *Sine Cerere et Baccho friget Venus* [Appendix D.6] seems to refer to Northern Mannerism of around 1600. This proverb originates from the Roman playwright Terence (*The Eunuch*, IV, 732), was transcribed by Erasmus in his *Adagia*, and gained popularity in the pictorial arts soon after.<sup>1295</sup> The proverb is both a warning against excess and a listing of the necessary ingredients for love – and the

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<sup>1294</sup> See note 1262.

<sup>1295</sup> Díez del Corral, "Sine Cerere et Libero, Venus Friget," 2–5.

love of art – to flourish.<sup>1296</sup> Hendrick Goltzius in particular depicted the theme multiple times, for patrons as prestigious as Rudolf II. The waist buckle Venus is wearing, in both of her representations in *The Five Senses* [Cat. No. 131], also refers to the particular period of Northern Mannerism. A strikingly similar example is Goltzius' *Venus and Amor* [Fig. 158], accompanied by an inscription that refers to the same proverb.<sup>1297</sup> When Venus is joined with Ceres and Bacchus, her power is great.

Two variants of *The Five Senses* [Cat. No. 131] exist. The one auctioned in Paris [Cat. No. 99] is most likely a copy of the one auctioned in Munich [Cat. No. 50], because some details have been lost in the process, such as the upper part of the display cabinet or *kunstkast* (see chapter 9). The iconography of these two works differs significantly from *The Five Senses*, even though certain elements recur, such as the personifications of the five senses, the unframed canvas on a stretcher, the cupboard, and the display cabinet. Notably absent are the eyeglasses and telescope, while the monkey unambiguously symbolizes taste. The dimensions of the three panels (ca. 24 x 37 centimeters), however, hardly differ at all. The thinned oak panel of *The Five Senses* [Cat. No. 131] has a thickness of about 0.3 centimeters. Analysis of contemporary panels supports a date of late sixteenth to early seventeenth century.<sup>1298</sup>

Two artists are currently associated with *The Five Senses*, Louis de Caullery and Frans Francken II. While de Caullery is certainly an interesting painter in relation to the origins of the constcemer genre [see Figs. 56 and 65], his way of depicting figures in particular does not match those in *The Five Senses*. For comparison, see for example de Caullery's *Venus*,

<sup>1296</sup> Melion, "Goltzius's 'Sine Cerere et Libero Friget Venus,'" 144.

<sup>1297</sup> The inscription reads: "*Cum Cerere, et Baccho mea iuncta potentia magna est.*"

<sup>1298</sup> Verougstraete, *Frames and Supports*; Wadum, "Historical Overview of Panel-Making Techniques," 149–77. Thanks also to Mélanie Bernuz, documentalist at the Musée Granet in Aix-en-Provence, for her help.

*Bacchus and Ceres with Mortals in a Garden of Love* [Fig. 160]. Frans Francken II, on the other hand, is frequently associated with constcamer paintings. His signed examples also often show a shallow room covered with wall hangings, but the monkey certainly deviates from his (workshop's) more naturalistic style [e.g. Cat. No. 25]. The representation of the figures, however, is highly reminiscent of those he added to the painting *Jesus in the House of Martha and Mary* [Cat. No. 139], signed and dated by Grimmer in 1614 (see chapter 9).

#### Aristotelian influences

The Peripatetic axiom (“nothing is in the intellect that was not first in the senses”) functioned as an ordering principle for the *Five Senses* series (see chapter 10). With regard to *The Five Senses* in Dijon [Cat. No. 131] we can discern similar classical, mainly Aristotelian, influences, most notably in the depictions of the four seasons and the five senses. Sense perception was perceived as crucial to acquire knowledge, and the sense of sight in particular stood out in this regard. This conception was informed by Aristotle's *Metaphysica* (see chapter 4). Vision, both physical and spiritual, was directly related to the acquisition of knowledge, and this train of thought must have appealed to painters.

Upon closer inspection, *The Five Senses* [Cat. No. 131] as a whole appears to revolve around the theme of sight. Following the emergence of treatises on art theory in southern Europe, artists from Antwerp seem to have taken their theories quite literally. Theory, from the ancient Greek *theoria*, meant “looking at things with the addition of understanding.”<sup>1299</sup> As such, constcamer paintings provide us with a pictorial rather than textual exemplification of contemporary artistic beliefs. Naturally the visual medium is omnipresent in this painting.

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<sup>1299</sup> Jaroszynski, *Science in Culture*, 15.

In addition, optical illusions take center stage: in the comparison between Sight, her mirror image and her painted portrait, and in the juxtaposition of the painter's subjects and their representation on panel in the picture-within-picture on the far right.

According to Aristotle animals (e.g. the monkey) have the power of sensation, while humans are also capable of art (*techne*) and reasoning.<sup>1300</sup> As a result, the monkey in *The Five Senses* [Cat. No. 131] seems metaphorically chained to sensual world, merely looking at us, while the beholder is capable of *seeing*, and thus penetrating, the deeper layers of meaning that present themselves to our senses. On the one hand, *The Five Senses* can be admired for its pictorial qualities and the numerous elements depicted on this panel. Being able to *see*, on the other hand, allows us to engage with the philosophical views put forward by the painted personifications and representations.

Interim summary: contemplation and introspection

*The Five Senses* [Cat. No. 131] presents us with a description of the world, a cosmography of the sublunary realm. The primary elements that made up this world are represented by *Fire*, *Water*, *Air*, and *Earth*. The personifications of the five senses are mainly occupied with themselves or with each other. The sense of taste finds further explication in the central picture-within-picture above the cupboard. Food and wine make the heart grow fonder, while in their absence the opposite is true (*Sine Cerere et Baccho friget Venus*). The arts thrive in times of prosperity, and so does the love of art. The painted portrait of *Sight* also seems to allude to this, as her hand is placed over her heart. Furthermore, human artifice is

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<sup>1300</sup> Aristotle, *Metaphysics*, 1.980b.

responsible for the manipulation of the four elements and thus the creation of works of “art” in its broadest sense.

Man-made objects are omnipresent in *The Five Senses*, in the form of sculpture, metalware and glassware, jewelry and coins, musical and optical instruments, (cabinet) paintings and furniture. Nature is represented by means of flowers (in a vase), fruits (in a basket), birds (pecking at Touch’s arm), and a monkey (chained to a ball). The artificial dominates the scene, with the artist as creator depicted on the far right. The practice of painting is illustrated with the unframed landscape on canvas, as well as the unfinished Venus on panel. The artist is shown holding palette and brush, while painting nature as it presents itself to his sense of sight.

Personal vision can be supported by various optical instruments. From the 1530s, nearly colorless glass was produced in Antwerp, and then from the 1580s in Middelburg as well. As a result, eyeglasses became available to the inhabitants of the region. The local glass industries also enabled the invention of the telescope, which on the basis of textual sources is attributed to Hans Lipperhey from Middelburg. The newly invented instrument soon found itself in the hands of Archduke Albert [Fig. 147]. At the time, technological innovations were quickly incorporated in paintings. For example, the torquetum by Apian appeared in a publication as well as in Holbein’s *The Ambassadors* [Fig. 21], both from 1533 (see chapter 6). The same is true for the dodecahedron depicted underneath the *Parnassus* [Figs. 34, 37 and 38], and the inclusion of the *perpetuum mobile* in constcamer paintings (see chapter 11).

In the absence of irrefutable proof, it is only possible to make a suggestion concerning the dating of *The Five Senses* [Cat. No. 131]. In my view, this constcamer painting was created between 1608 and 1612. These dates mark the first textual documentation of

the telescope (1608), as well as the first signed and dated constcamer paintings within the catalogue [Cat. Nos. 138 and 25] by Abel Grimmer (1608) and Frans Francken II (1612). Several clues point to an Antwerp origin, such as the depicted ebony *kunstkast* and the display of glassware and optical instruments, whose manufacture depended on a well-established glass industry. The figures suggest at least a contribution from Francken II.

The first dated depiction of a telescope (1611) can be found in the painting *Air* by Jan Brueghel I, among scientific instruments that would later recur in his *Allegory of Sight* [Cat. No. 17] and *Air or Optics* [Fig. 316]. The comparable telescope in *The Five Senses* [Cat. No. 131] is presented as a philosophical instrument to further our understanding of natural phenomena. One of the differences between this constcamer painting and its derivatives [Cat. Nos. 50 and 99] is the presence only in the former of a mirror image of the personification of Sight. The mirror could serve as a symbol of imitation (see chapter 10) and as a means of looking at oneself. In this pictorial context, the mirror image is not so much a reference to knowledge of the visible universe, but rather representative of self-knowledge.

## Proverbial eyeglasses

The invention of eyeglasses or *conspicilla* [Fig. 149] was included in Stradanus' *Nova Reperta* (ca. 1590).<sup>1301</sup> The figures in this print are all actively engaged in the act of viewing, suggesting that with the aid of eyeglasses a person could *see* better and therefore move closer to a true understanding.<sup>1302</sup> Positive views on eyeglasses can be found in painted self-portraits such as that of Romanist Lambert Lombard [Fig. 151]. That artists used eyeglasses

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<sup>1301</sup> The inscription reads: "*Inuenta conspicilla sunt, quæ luminum Obscuriores detegunt caligines.*"

<sup>1302</sup> Desborough, *The Changing Face*, 126.

to carry out their profession is evidenced by a *Self-Portrait* (1558) of the illuminator Simon Bening [Fig. 150]. Bening's portrait of local historical value was furthermore included in a constcamer painting by Frans Francken II [Cat. No. 13]. Similarly, eyeglasses can be found in the portrait paintings of scholars (see chapter 6), such as *Saint Jerome in his Study* [Fig. 10] and the *Portrait of the Goldsmith Wenzel Jamnitzer* [Fig. 24]. These eyeglasses are depicted as a dignified tool for both painting and learning.

Skepticism of eyeglasses, put forward for example by the proverb to “sell somebody glasses” meaning to deceive someone, is countered in Stradanus' print, but associations with the possibility of “wrong vision” or false judgement persisted in the visual arts.<sup>1303</sup> One such example is the print *Wrong Conviction Alienates the World from the Truth* (ca. 1575-1581) [Fig. 123], after a design by Hendrick Goltzius (see chapter 7). In it, the personification of the *Mundus fascinatus* or enchanted world has turned his eyes away from *Veritas* or the truth, while *Opinio* or opinion is reading from a book.<sup>1304</sup> The inscription underneath indicates that the world is enchanted and deceived by delusion, referring to *Opinio* who does not look through her eyeglasses, but wears them upside down on her head.<sup>1305</sup>

In this section, early modern proverbs and their pictorial counterparts that include *conspicilla* will be studied. Successively the German proverb “*Was Helffen Fakeln Licht oder Briln, so die Leut nicht Sehen Wollen,*” the Delphic maxim “Know Thyself” as well as its sixteenth-century counterpart “Nobody knows himself,” and the Dutch proverb, “*Wat baten kaars en bril, als de uil niet zien en wil,*” will be discussed. The meaning of these aphorisms

<sup>1303</sup> Honig, *Painting & the Market*, 2 (note 6).

<sup>1304</sup> See “Knowledge and Opinion” in Jaroszynski, *Science in Culture*, 23–27. As stated on page 23: “According to Greek etymology, what belongs to science is what we retain in our knowledge. What merely appears to be so, or is an illusion, belongs to opinion.”

<sup>1305</sup> The inscription reads: “*Ergo inimicus vobis factus sum verum dicens vobis? Galat. 4 / Fascinatio enim nugacitatis obscurat bona, et inconstantia concupiscentie transvertit sensus sine militia. Sapien. 4 / Valsce waen den werlt so betovert en bedriecht : Dat hi trouwe waerheit haet, des het recht vervliecht.*”

and their direct and indirect inclusions in the constcamer genre will be outlined. In short, personal vision aids in the form of eyeglasses exemplify both the limits and the expansion of human vision.

*“Was Helffen Fackeln Licht oder Briln, so die Leut nicht Sehen Wollen”*

Heinrich Khunrath (see chapter 9) included an engraving [Fig. 118] of an owl wearing eyeglasses and holding two torches, flanked by two candles, in the second edition of his *Amphitheatrum Sapientiae Aeternae* (Hanau: 1609). Above the owl, Khunrath signed the engraving by hand. Underneath the image is printed *“Was Helffen Fackeln Licht oder Briln, so die Leut nicht Sehen Wollen.”* In other words, there is no use for torches, light or eyeglasses, if people do not want to see. The emblem can already be found in an earlier publication by Khunrath [Fig. 120], his *Von Hylealischen, Das ist, Pri-Materialischen Catholischen oder Allgemeinen naturlichen Chaos*, also known as *Chaos* (Magdeburg: 1597).<sup>1306</sup> The text and woodcut image are accompanied by yet another phrase: *“Volenti Non Fit Iniuria.”* This translates as “to a willing person, injury is not done.”

Khunrath’s message is clear – candles, light and eyeglasses are useless if people do not want to see. Being willing to see is the prerequisite for acquiring knowledge, especially the kind of theological knowledge that Khunrath imparts through his books. In the emblem, the owl refers to a fool or ignoramus, similar to the owl-headed iconoclasts depicted in the *Allegory of Ignorance* [Cat. Nos. 28, 49, 53, and 116] (see chapter 10). In Christian iconography, the owl, who loves darkness, is sometimes a symbol for the infidel who does

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<sup>1306</sup> Here the inscription reads *“Was helfen Fackeln / Liecht oder Brillen / Wann die Leut nicht Sehen wollen.”*

not want to be enlightened.<sup>1307</sup> Khunrath may have intended similar connotations, since his alchemical works propose a Christianized natural magic.<sup>1308</sup>

Christ as the Light (*Lux*) can be found in two constcamers both entitled *The Vanity of Human Life* [Cat. Nos. 98 and 145]. In the left foreground a winged *putto* holds up a painting of Christ making a blessing gesture with an inscription underneath that reads “*Ego Sum Lux Mundi. Via / Veritas. et. Vita*” (John 8:12).<sup>1309</sup> This refers to Christ as the sun, who illuminates the world and shows the way, the truth and the life. As such, Christ is sometimes equated with Apollo, the god of Light. This can be gathered, for example, from George Wither’s emblem *Non Semper Arcum Tendit* [Fig. 187]. Apollo is seated on a square block inscribed with his name in Greek which starts with an alpha and ends with an omega, the first and last letters of the Greek alphabet, and a symbol for Christ as the beginning and the end.

The message of the two constcamers [Cat. Nos. 98 and 145] is reinforced by the female figure who, surrounded by all kinds of distractions, only has an eye for the flaming vessel she holds up in front of a reflecting sphere [compare with Fig. 195]. She is probably a personification of Wisdom (*Sapienza*), as prescribed in the *Iconologia* [Fig. 245]. As Ripa explained, wisdom corresponds to faith and the contemplation of God (Aristotle’s first philosophy), instead of earthly things.<sup>1310</sup> A reflecting sphere suspended from the ceiling also features in the *Gallery of Art Objects* [Cat. No. 6] and the picture-within-picture, or rather constcamer-within-constcamer, of a *Merry Company in a Room Hung with Paintings* [Cat. Nos. 67 and 111].<sup>1311</sup>

<sup>1307</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 198.

<sup>1308</sup> Van Veen and Smeesters, *Physicae et Theologicae Conclusiones*, 22.

<sup>1309</sup> Díaz Padrón and Royo-Villanova, *David Teniers*, 227; Wouk, “Frans Floris,” 39 & 63 (note 2).

<sup>1310</sup> Ripa, *Iconologia*, 440–43.

<sup>1311</sup> In the constcamer dataset this sphere is annotated with the term suspended glass sphere. This type of sphere, also known as a witch ball, was in all probability actually produced in the seventeenth century.

*The Laboratory of the Alchemist* [Fig. 50] represents “the synthesis of Khunrath’s Theosophy, which he defines as ‘Wonder-working Catholic Theology, in the ternary (that is Biblically, Macro and Microcosmically)’.”<sup>1312</sup> The ternary refers to the “Triune Apocalyptic Key” (Trinity) or the Three Books of God (Father), Nature (Spirit) and Man (Son), also referred to as Know God, Nature, and Thyself.<sup>1313</sup> The same triad can be found in the synoptic table *Ordo Universi* (Antwerp: 1585) [Fig. 251] (see chapter 5). The Delphic maxim “Know Thyself” [e.g. Fig. 249] plays a prominent role in Plato’s dialogue *Phaedrus* (ca. 370 BC), in which Socrates remarks the following. “I’ve not yet succeeded in obeying the Delphic injunction to ‘know myself,’ and it seems to me absurd to consider problems about other beings while I am still in ignorance about my own nature.”<sup>1314</sup>

### “Know Thyself”

That Antwerp artists were familiar with this maxim of Greek philosophy is attested by a drawing by Pieter Bruegel I, dated 1558 [Fig. 121]. The *Elck*, or *Philistine* as the work is sometimes called, is a preparatory drawing for the print of “*Elck*” or *Everyman* [Fig. 122]. In them several bearded old men (everybody) with eyeglasses and a lantern are vainly seeking themselves “in the objects of this world.”<sup>1315</sup> Against the wall a framed picture of a fool clarifies the theme of the overall composition. Underneath the fool, who sits on top of a pile of (broken) objects and looks at himself in a convex mirror, an inscription informs us that he

<sup>1312</sup> Forshaw, “Alchemy in the Amphitheatre,” 200.

<sup>1313</sup> Forshaw, 199.

<sup>1314</sup> Bollert, “Plato and Wonder,” 4.

<sup>1315</sup> [https://www.britishmuseum.org/collection/object/P\\_1854-0628-36](https://www.britishmuseum.org/collection/object/P_1854-0628-36) (accessed February 9, 2021). See also Nordenfalk, “The Five Senses,” 10; Ganz, *Neugier & Sammelbild*, 85; Forshaw, “Oratorium – Auditorium – Laboratorium,” 210.

is Nemo or Nobody, and that Nobody knows himself. The maxim “Know thyself” is thus negated in this drawing (“*Nymant en ckent sy selve*”) [Fig. 121].<sup>1316</sup>

The drawing was published as a print by Hieronymus Cock in the same year or slightly after [Fig. 122]. The print is in many ways similar to the drawing, with some small variations. The inscription underneath the fool reads “*Niema[n]t en kent he[m] selve[n]*,” and “*Nemo non*” is added onto a nearby bale, meaning “Not nobody.”<sup>1317</sup> The engraving includes the *titulus* “Nobody does not seek his advantage everywhere. Nobody does not seek himself in all things. Nobody does not look everywhere for private fortune. One pulls here, another there; for all there is only the love of possession.”<sup>1318</sup> As a result, not nobody is said to seek himself in all things, but everyman (*Elck*) is.

Underneath the engraving a letterpress text is attached with further explanation. “Everyone seeks himself in all things / Throughout the entire world; he is already damned; / How then can someone become lost / If everyone now always seeks himself? / Everyone pulls for the longest end, as one can see here, / The one from above, the other from below. / No-one completely knows himself / Whoever considers this well sees a great wonder.”<sup>1319</sup> Everyman fails to see the light, both literally and metaphorically, and Nobody may find illumination in the image.<sup>1320</sup> The reference to wonder or *wondere* in the letterpress text resonates with Socratic (via Plato) and Aristotelian ideas about acquiring knowledge (see

<sup>1316</sup> Ammon and Vögel, *Die Pluralisierung des Paratextes*, 124–25.

<sup>1317</sup> Rothstein, “The Problem with Looking,” 147.

<sup>1318</sup> Translation taken from Rothstein, 146. Original in Latin: “*Nemo non quaerit passim sua commoda, Nemo / Non querit sese cunctis in rebus agendis, / Nemo non inhiat prius undique lucris, / Hic trahit, ille trahit, cunctis amor unus habendi est.*”

<sup>1319</sup> “*Elck soect hem selven in alderley saken / Over al de werelt, al wort hy ghevloect, / Hoe can dan iemant verdoelt gheraken / Als elck hem selven nu altijt soect. / Elck treect oock om dlanenste soomen hier siet / Deen van boven, dander van ondere. / Niemant en kent schier hem selven niet / Diet wel aenmerct die siet groot wondere.*” See Rothstein, 147.

<sup>1320</sup> Rothstein, 151–53.

chapter 4).<sup>1321</sup> Wonder is put forward as a remedy against the ignorance of the fool, leading the way to insight and self-knowledge.

*“Wat baten kaars en bril, als de uil niet zien en wil”*

Whether or not a Dutch variant for the proverb in Khunrath’s emblem [Figs. 118 and 120] already existed in the 1550s remains unclear, even though *Elck* is accompanied by eyeglasses and a candle.<sup>1322</sup> Evidently the *Leut* or everyman in *“Was helffen Fackeln / Liecht oder Brillen / Wann die Leut nicht Sehen wollen”* (1597) are represented by Khunrath as an owl. This proverb in the form of a rebus can, however, also be found in early seventeenth-century paintings made in Antwerp. For example, a piece of paper in the *Still Life* [Fig. 114], created after the *Poor Louse Meal* [Fig. 115] of around 1600, shows similar imagery. The text on this piece of paper is no longer readable in the former [Fig. 114].<sup>1323</sup> In the latter [Fig. 115], *“Goedendag bruer”* (good day brother) can be read above, and *“Uilen spiegel”* (owl mirror) below the image of an owl visible in a mirror and flanked by a candle and eyeglasses.

The inscription *“Uilen spiegel”* might refer to Till Eulenspiegel, a fool or jester whose adventures were published in a booklet around 1515.<sup>1324</sup> Since the owl appears as a mirror image in both the *Still Life* and *Poor Louse Meal* [Fig. 114 and 115], it is probably us (the beholders) who are portrayed as owls, or fools. A meal for the poor, including pancakes and porridge, is depicted in front of the piece of paper, while a vista in the upper right corner depicts a landscape with two wanderers, passing a gibbet on the one side, and a windmill on

<sup>1321</sup> The focus of Socrates’ philosophy was not on the study of external nature, but on the study of man as a moral being. See Bollert, “Plato and Wonder,” 4.

<sup>1322</sup> This proverb does not feature in Bruegel I’s *Netherlandish Proverbs* (1559) or Frans Hogenberg’s *The Blue Cloak* (1556-1560), available online via <http://hdl.handle.net/10934/RM0001.COLLECT.481229> (accessed February 9, 2021).

<sup>1323</sup> The inscription surrounding the red plate with pieces of fish is no longer readable in both instances.

<sup>1324</sup> Höpel, “Eulen in Der Emblematik,” 21–22.

the other.<sup>1325</sup> Another variation on this theme dates from 1607 and is signed by Hieronymus Francken II. His *Poor Louse Meal* [Fig. 116] similarly represents pancakes, but no vista, and on the paper posted against the back wall an owl is again visible, but not in a mirror.

This time the text underneath the owl on a perch, flanked by eyeglasses and a candle, reads “*Al heeft hy kaers en bril / [...] uyl niet zien wil.*” In 1607 there is thus painted evidence of familiarity with the proverb “What use are candle and eyeglasses, if the owl does not want to see.” The beholder is urged to look more careful in order to truly *see* with the aid of light and eyeglasses. Instead of looking for physical pleasure, and vainly seeking oneself in material objects, the piece of paper in this painting [Fig. 116] seems to suggest that one would do well to look for metaphysical insight and enlightenment. As Bocchi expressed it already in 1555, the “significance of weighty things is shown by a picture [Fig. 249]. Whatever is hidden deeper becomes more apparent” (see chapter 5).

A subtle reference to the Dutch proverb as well as alchemy can be found in Teniers II's *The Artist in his Workshop* [Cat. No. 61] of 1635 (see chapter 10). Against the back wall we find a *Witch or Alchemist* reading from a book while stirring a large pot. More significantly yet is *A Monkey Encampment* [Fig. 117] of 1633, only partly visible in the right foreground. This is the painting placed on the floor in between the *Peasants Playing Cards* and *Saint Teresa in Ecstasy*. It is the invisible part that interests us most here. A piece of paper depicting eyeglasses, an owl, and a candle is attached to one of the military tents. Underneath is written “*Bon Vin Day,*” which might translate as “Good Wine Day.”<sup>1326</sup> The imagery unmistakably refers to the Dutch proverb “*Wat baten kaers en bril, als de uil niet zien en wil,*” with monkeys that seemingly magnify the folly of human behavior.

<sup>1325</sup> Perhaps this is a reference to Christ as the *Lux Mundi*, who shows the way (see above).

<sup>1326</sup> Russell Corbett, “Convention and Change,” 251 & 265 (note 12).

Moreover, Teniers' familiarity with the proverb can be established based on a series of six small paintings that feature monkeys in human guises, of which *The Monkey Painter* [Cat. No. 83] is part (see chapter 10). *The Monkeys' Banquet* [Fig. 292] is the only dated example of the series: 1660.<sup>1327</sup> The date can be found on a piece of paper stuck against the wall, accompanied by a drawing of again an owl on a perch, flanked by eyeglasses and a candle [Fig. 293]. One of the corners has come loose, in a similar manner as in the previously mentioned depictions of the proverb [Figs. 114 to 117].

In 1635, the same year Teniers II created *The Artist in his Workshop* [Cat. No. 61], Wither published his *A Collection of Emblemes* (see chapter 5). One of its emblems, entitled *Coecus Nil Luce Iuvatur* or "the blind are not helped by light," depicts the same rebus [Fig. 255] and is accompanied by an explanation. According to the title, "Hee that is *blind*, will nothing *see*, what *light* soe're about him *bee*." Crispijn de Passe I (ca. 1565-1637), active in Antwerp from 1580 to 1585, created this emblem already around 1611, when it first appeared in the *Nucleus emblematum selectissimorum* (Arnhem) by Gabriel Rollenhagen (1583-1619).<sup>1328</sup> In the emblem, the sun was added as a source of light to the torches and candles. Wither explains that while none can see better than the owl at night, during the day these lights deprive the bird of its sight.

De Passe I's emblem [Fig. 255] depicts a mouse right in front of the owl, but because of its blindness the little rodent is not in danger. In the left background a depiction of the Aesopic fable of the owl and the birds can be discerned.<sup>1329</sup> The Aesopic owl is a symbol of wisdom and tolerance, as opposed to the foolish owl in front, and is reminiscent of

<sup>1327</sup> The titles of the other four paintings are *The Monkey Sculptor*, *Monkeys in a Tavern*, *Monkeys at School*, and *Monkeys Smoking and Drinking*. Available via <https://www.museodelprado.es/> (accessed February 10, 2021).

<sup>1328</sup> Höpel, "Eulen in Der Emblematik," 21.

<sup>1329</sup> Zenkert, "The Owl and the Birds," 548–53.

Hoefnagel's interpretation of the owl in his *Allegory for Abraham Ortelius* [Fig. 254] of 1594, which emphasized that art has no enemy except the ignorant (see chapter 5).<sup>1330</sup> In the right background a carpenter's shop can be seen. This might be a reference to Christ, and the use of sight for acquiring theological knowledge. As Wither put it, "the rayes of truth divine, though, brighter than the day-light, shee doth shine." He concludes that no one is as blind as those who do not want to see.

#### Owls in *Het Schilder-Boeck*

As the emblem *Coecus Nil Luce Iuvatur* [Fig. 255] illustrates, the owl could symbolize the opposites of wisdom and ignorance, sometimes even within one image. Its ambiguous meaning is also described in *Het Schilder-Boeck*. According to van Mander, the owl refers to wisdom, as the bird of Minerva (or Athena).<sup>1331</sup> Sometimes it is used as a symbol for those who pursue vain science, with no regard for virtue, because the owl can see by night, but not by day [Fig. 129]. Furthermore, Athenians considered the bird to be a sign of victory, while the Egyptians thought of the owl as a sign of death.<sup>1332</sup> When describing Pallas or Minerva, van Mander also stated that because an owl can see by night, a wise man is "perceptive about all, night and day, seeing things that are hidden from others."<sup>1333</sup>

<sup>1330</sup> Höpel, "Eulen in Der Emblematik," 21; Zenkert, "The Owl and the Birds," 568.

<sup>1331</sup> See "Den WI" in van Mander, *Het Schilder-Boeck*, part 6, book 2, fol. 131r. The owl as the bird of Minerva is described, among others, in Ovid's *Metamorphoses*. The birds of Minerva are discussed in his second book. Nyctimene is changed into an owl, because of her (unnamed) wicked crimes. She becomes Minerva's owl and conceals her shame in the dark of night. Ovid, *Metamorphoses*, 2.531.

<sup>1332</sup> Van Mander, *Het Schilder-Boeck*, part 6, book 2, fol. 131r.

<sup>1333</sup> Van Mander, part 5, book 5, fol. 43r. Original in Dutch: "Sy hadde by haer voeten, op t'hoeft, oft voerde den WI, als voghel die haer toegewijdt was: sommighe meenen, om datse t'Athenen Goddinne was, alwaer veel Wlen altijd waren: doch het is, om dat desen voghel by nacht siet, en dat een wijs Man is opmerckigh over al, nacht en dagh, **siende dingen die ander verborgen zijn**: hierom hadde Pallas ooc goeden sin aen de wel siende en wakende Draken oft Slangen, alle Dieren de leerlustige wakende gheesten niet ongelijck" (my emphasis).

Henri met de Bles (ca. 1510-ca. 1566), active in Antwerp from 1533 to 1566, is also associated with an owl [Fig. 131]. His nickname was “*Civetta*” or little owl (in Italian). Gian Paolo Lomazzo (1538-1592) started this tradition with his *Trattato dell'arte de la pittura, scoltura et architettura* (Milan: 1584, p. 475).<sup>1334</sup> Karel van Mander, in turn, called met de Bles “*den Meester van den Wl*” or the master of the owl.<sup>1335</sup> Henri met de Bles hid a depiction of an owl in his works, which would subsequently be searched for by the beholders. Perspicacity was required to discern the owl in the paintings of this artist, thus enabling to see “things that are hidden from others.” Henri met de Bles is associated with two *brandekens* (see chapter 10) depicted in constcamer paintings [Cat. Nos. 25 and 32], unfortunately too small to discern his trademark owl.

#### Rebuses in constcamers

Two constcamer paintings in the constcamer catalogue include the pictorial motif of the owl with candle and eyeglasses, which no one has noticed before. The *Owl with Candle and Eyeglasses* is depicted in the *Kunstkammer with Venus at her Toilet* [Cat. No. 39] signed by Jan van Kessel I, a nephew of David Teniers II [Fig. 273], and dated 1659, as well as its derivative *Allegory of Sight: A Collector's Cabinet with a View of Antwerp in the Distance* [Cat. No. 126] (see chapter 10). The picture-within-picture is partly obscured by the much larger *Seascape with Manned Ship*, which a monkey is looking at with eyeglasses held upside down. What use are the eyeglasses for the monkey, and candle and eyeglasses for the owl, if they do not want to see?

<sup>1334</sup> <https://www.christies.com/lotfinder/Lot/herri-met-de-bles-called-civetta-circa-1586035-details.aspx/> (accessed June 10, 2020); van Mander, part 4, fol. 219v. Lomazzo was a Neoplatonist, see Cosgrove, “Images of Renaissance Cosmography,” 91.

<sup>1335</sup> Van Mander, *Het Schilder-Boeck*, part 4, fol. 219v.

The juxtaposition of the *Owl with Candle and Eyeglasses* and the *Seascape with Manned Ship* could additionally allude to the title page [Fig. 197] of Bacon's *Of the Advancement and Proficiency of Learning* (see chapter 5). At the bottom of the two pillars representing *scientiae* and the *mundus visibilis*, on the left, and *philosophiae* or the *mundus intellectualis*, on the right, two owls each holding a candle can be discerned. The candles represent visible and intellectual light, respectively. Above them, the base opens to a seascape with ship, while the transition is marked by the inscription "*multi pertransibunt et augebitur scientia*" [see also Fig. 198]. Many will pass and will increase knowledge.

The deliberate inclusion of the *Owl with Candle and Eyeglasses* in the two variants of the allegory of sight [Cat. Nos. 39 and 126] emphasizes that one of the purposes of constcamer paintings could be to record and transmit knowledge to those willing to see. The vista shows a townscape of Antwerp in the back, and the Scheldt in the foreground. The manned ships on this river could similarly refer to those that travelled and brought back knowledge. This knowledge could take the form of tangible objects, which in turn could refer to immaterial knowledge. For example, the cross-shaped jewelry embodies the Christian faith in general, while the pendant inscribed with "IHS" refers to the Jesuits in particular [Cat. No. 39]. Referents to knowledge of God are surrounded by objects that underscore knowledge of Nature (e.g. the *Study of Insects and a Snail*) and of Thyself (e.g. the mirrors).

Interim summary: multiple views

About forty-eight eyeglasses could be found in twenty-one constcamer paintings in the catalogue [Appendix A]. Sometimes they lie unused on the floor or on a table, other times they are worn by a human figure or a monkey, and alternatively the animal holds them upside down in front of its eyes. As with most entities depicted in constcamer paintings,

these objects do not offer one single interpretation. The eyeglasses embody both the limits and the expansion of personal vision and seem to indicate an awareness of both the self and the other, as well as the relativity of viewpoints.

*“Aly et alia vident”* or “others see it yet otherwise” is wisely inscribed on a piece of paper depicted in *The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73] (see chapters 3 and 10). This expression is accompanied by three representations of the cosmos: the geocentric Ptolemaic system [Fig. 215], the Copernican heliocentric system [Fig. 218], and the geoheliocentric Tyconic system [Fig. 219]. In a period of new knowledge and its inherent uncertainties, all kinds of issues were called into question, including the composition of the universe itself. For example, heliocentrism was not widely accepted until the end of the seventeenth century. This allowed multiple views to coexist until a consensus was reached, and invited spectators to discuss and form their own understandings.

### Summary: instruments and self-knowledge

Early modern things aided in the production of knowledge. Especially new knowledge could be obtained by means of objects with which something could be measured, which improve personal vision, or which model natural phenomena. Such instruments feature abundantly in constcamer paintings, and can sometimes be seen as portraits of existing objects. In the case of less accurate or detailed representations, preexisting depictions such as another constcamer painting may have formed the basis of the painting, making them act as types rather than portrayals of specific instruments. Like the paintings themselves, these objects contributed to the description of the world, which then allowed for interpretation and explanation.

*Scientifica* such as the telescope, which made its first appearance in sources from the early seventeenth century, emphasized both the expansion and limits of human vision, and are thus related to self-knowledge. Knowledge of the self, of the world, and ultimately of God could be acquired through artifacts, instruments and devices, as long as the viewer or beholder was willing to see. Only then things were thought to come to light that remained hidden from others. Pictorial culture offered multiple meanings, rather than unambiguous truths, that are dependent on the viewer and the mode of viewing. The ability of artists to communicate the nature of things conceptually transcended language, and ascribed vision a leading role in the learned communities of the early modern period.

# 14 Conclusions

“WER HIER REINSCHAUT UND DURCHBLICKEN WILL, MUß SEHEN KÖNNEN ODER SEHEN  
LERNEN. WER BLOß GLOTZT, BLEIBT BLIND.”

– Renn, “Rettung Aus Sehnot,” 26.

This final chapter provides a summary of the thesis. Subsequently the main results will be presented. A reflection on the use of digital tools is followed by recommendations for future research.

## Synopsis

This research has highlighted the purposes of collecting, and the intellectual dimensions of pictures of collections or constcamer paintings. A definition of what a constcamer paintings actually is has been offered for the very first time, as well as an overview of 161 examples that have survived and are known today [Appendix A]. When studying the genre, the pictorial content of such paintings was central, rather than questions about attribution or material properties. In order to identify the subjects and objects, as well as the immaterial concepts they subtly refer to, the images of constcamer paintings were catalogued digitally. Digital tools were used to annotate the images, and to draw connections between them. The resulting dataset helped me to see what is depicted in the images, and can hopefully also serve others to (learn to) look more carefully at constcamer paintings.

Looking at the constcamer genre through a dataset revealed repetitions of entire constcamer paintings as well as its constituent parts. This approach furthermore brought the discrepancy between contemporary and modern systems of thought to the fore. Consequently, contextual knowledge is indispensable for the interpretation of the pictorial content of the constcamer paintings – of the historical, social and cultural context on the one hand, and of the pictorial context on the other. The latter provides insights that are usually absent from preserved material or textual collections. The act of seeing functions as a metaphor for cognition, or the acquisition of immaterial impressions that enable thinking according to classical and early modern views.

Wonder was recognized by the ancients, and subsequently in the early modern period, as both an instigator of philosophy and an exposé of ignorance. Knowledge and understanding could be acquired by means of storing experiences in memory, or in textual and material collections. Especially the communicative potential of images was recognized in the Renaissance, which could be used to train memory and achieve eloquence and wisdom. Looking at such images, tangible or intangible, involved both the external and internal sense of sight. Making such images entailed visualizing visions and shaping immaterial concepts and ideas. Idealized visions of selective imitation, for example the composite image of Helen of Troy, were the result of the creative ability of artists.

The emphasis on pictorial, in addition to material, textual, and immaterial, collections in the early modern period meant that both things and representations of those things could serve as bearers of knowledge. Artists and scientists, or more specifically painters and physicians, had the same patron saint in the (Spanish) Habsburg Netherlands, namely Saint Luke. Both were practiced in observing nature; its outer appearance as well as the inner nature of things. The recording of such observations was conceived as a way of being able to

analyze them. This concept was applied not only to nature, but also to man-made objects such as paintings. Representations thus made the inaccessible accessible, allowing for different interpretations.

In the sixteenth century, the rich port city of Antwerp became one of the largest production centers of visual (both textual and pictorial) culture. The focus of interest was on ancient and contemporary Rome, and local customs and history. In addition, religion played an important role and made images into tools for introspection and devotion. The seventeenth-century dominance of an eclectic Counter-Reformist Christian-Aristotelian worldview established a threefold division of the universe into the divine, the macrocosm, and the microcosm. The humanistic education of the city's inhabitants centered on a combination of theory and practice. Painting acquired a special place at the top of the hierarchy in the broader region because of its ability to transfer knowledge from all branches of human enquiry.

Artificial perspective was among the techniques that Antwerp artists had at their disposal around 1600. This meant that interiors could now be convincingly constructed on a two-dimensional plane. Paintings of interiors became much more common from then on, which were provided with furnishings, decorations, visitors, and objects. In a prosperous trading town like Antwerp, collections were soon built up in all kinds of homes. Such interiors and collections were subsequently pictured in constcamer paintings. These are nevertheless idealized inventions, since the creators recombined subjects and objects in a partly imaginary setting that could never be seen together in reality. The feast of recognition and the playing with proportions is characteristic of the genre.

Contemporary textual sources on constcamer paintings such as inventories provide little information on the pictorial content of the pictures of collections and their associated

meanings. They do, however, provide information on the local audience for the constcamer genre, including artists, merchants, clerics, nobles, and the rulers of the Spanish Habsburg Netherlands. Some of the creators are also mentioned, such as the curator of the renowned collection of *liefhebber* Cornelis van der Geest. Numerous paintings included in his collection were selected and carefully imitated within the context of various interiors constructed by van Haecht II through one-point perspective. For a better understanding not only creator and audience can be considered, but also historical and intellectual contexts and the depicted objects and subjects themselves.

The Archdukes and subsequent Governors of the Spanish Habsburg Netherlands were a major influence on the art production of Antwerp and Brussels, the political capital of the region. Acquisitions from their collections and the palaces that housed them feature in the constcamer genre and reflect courtly tastes and aspirations. Contemporary developments in the arts and sciences feature prominently in constcamer paintings, such as the emergence of pictorial genres and styles, and advances in land surveying and the exploration of the universe. Collectibles also provide insight into the objects traded in the economic capital of the region, Antwerp, where markets and shops provided access to a wide variety of materials. Like other painterly genres, constcamer paintings could be made on demand or offered *on spec*, which granted artists great creative freedom.

An overview of the constcamer genre mainly reveals that there was no linear progression over the course of the seventeenth century. Instead, certain versions or models were created and recreated by family and workshop members, and followers. The close-knit artistic community of Antwerp, united in the Guild of Saint Luke, facilitated exchange and collaboration on a large scale. This resulted, among other things, in collectively created constcamer paintings representing the pinnacle of Antwerp artistry. Copies of such paintings

were commissioned even by the Archdukes themselves, indicating that there was a serious demand for the copy at the time. Such imitative practices have led to the arbitrariness of attributions, signatures, and dates, as well as the focus of this study on pictorial content.

The study of the pictorial properties and sources underlying constcamer paintings reveals similarities across the constcamer catalogue. In this way new interrelations could be established. An elusive object that has been documented almost exclusively in constcamer paintings is the *perpetuum mobile* invented by Cornelis Drebbel around 1604. A second variant or derivative of this instrument could also be discerned within the catalogue. The attempt to explain why the latter was included in the specific context of the *Allegory of Hearing* uncovered how meaning was given to natural phenomena previously unobserved – for which there was no explanation yet, or which was known only to a select few at the time.

In seventeenth-century pictorial culture nothing is only what it seems at first glance. A higher meaning or essence was often captured by cultural expressions such as Ovid's *Metamorphoses* and the images based on his stories. Hence, for clarification, an interpretation or *Wtleghingh* was published by Karel van Mander in 1604 as a handbook to be able to discern such hidden meanings. In addition, vision aids were developed that presented things more clearly to both the eyes of the body and the eyes of the mind, granting the viewer access to both existing and new knowledge that required interpretation. It had become clear that the disposition of the viewer influenced the meaning given to what was seen. One thus had to be able to see, or learn to see, in order to acquire knowledge and understanding, both then and now.

## Main outcomes

Constcamer paintings can be understood as *theatra*, as “places for seeing” with both the internal and external sense of sight. The abundance of things – objects, subjects, and concepts – depicted in constcamer paintings encouraged the use of vision aids. Such contemporary tools could have been literal aids to vision, such as magnifying glasses, as well as figurative ones, such as the interpretations offered by van Mander’s *Het Schilder-Boeck*. In modern times we can add digital tools, for the identification of pictorial content and subsequently its contemplation. The constcamer genre demands an interpretation beyond merely looking at the representations, and thus an attentive engagement with the pictures of collections, in order to make sense of them.

Constcamer paintings offer multiple views or interpretations, and not an unequivocal meaning. This gives rise to “wishful seeing,” or projecting rather than distilling meaning, which can be countered to some extent by contextualizing both the parts and the whole. The reconstruction of the intellectual climate that produced the constcamer genre indicates that artists actively contributed to knowledge formation. By studying and recording the nature of things, or making the invisible visible, knowledge could be shared. As such constcamer paintings can be understood as objects of learning for those inclined to see. The sense of wonder that the images of constcamers can inspire may lead to a desire for knowledge and the discovery of hidden perspectives.<sup>1336</sup> They form a kind of artificial memory, a *winckel* or treasury of things worth knowing.<sup>1337</sup>

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<sup>1336</sup> This phrasing is inspired by van Mander, who wrote: “*verborghen meeninghe t’ontdecken*.” See van Mander, *Het Schilder-Boeck*, part 1, chapter 2, fol. 8v.

<sup>1337</sup> Again following van Mander: “*schatcamer der wetenheyt*.” See van Mander, part 1, chapter 2, fol. 9v. In turn inspired by Dürer’s postscript (see chapter 5) in *Vier Bücher von Menschlicher Proportion* (Nuremberg: 1528), fol. T1r.

The similarity between a thing and the image of a thing made it possible for one to replace the other.<sup>1338</sup> Cognition is nevertheless vital for penetrating deeper layers of meaning. Just as the letters of the alphabet needed to be learned to in order to understand writing, so pictorial signs needed to be studied in order to understand painting. Both had their origins in the *Teycken-const* or art of signs that allowed a creator – be it God or an artist – to express himself. The reading of these signs is time-bound and, moreover, depends on the reader's frame of reference. Therefore, only an approximation could be given of the plurality of meanings embedded in seventeenth-century pictures of collections, which appeal to the *nous poietikos* for generating insights, informed by the conditions that enabled their creation.

## Reflection on the use of digital tools

The central aim of this thesis was to conduct a holistic study of the seventeenth-century genre of constcamer paintings, and to explore how modern digital tools can assist in this process. In this section, I will share some of the experiences gained, and lessons learned, from working with such tools that I believe could also be relevant to others.

When building a dataset as part of a research project, it is important to realize that under most conditions such a dataset is a means of organizing information, not a source of truth, and that for the researcher, who is often not primarily an archivist, knowledge is not located in the dataset. This is significant because first, compiling a flawless dataset is an impossible goal, and second, such striving for perfection is unnecessary for answering

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<sup>1338</sup> “Want is Teycken-const van Schilderen Vader, / Gheen dingh malcander can ghelijcken nader.” According to van Mander, part 1, chapter 2, fol. 10r.

research questions. I would recommend making a dataset with yourself as the end user in mind – for your current (instead of future) purposes – and publishing it online, if possible, so that other people have a chance to use and contribute to it as well. To this end, it is advisable to work as consistently as possible; do not go to extremes, as concessions will inevitably have to be made.

Make sure to use existing ontologies (i.e. structured vocabularies) from the outset of the research project. Do not attempt to create one yourself, because this is a highly specialized area of expertise.<sup>1339</sup> Choose the largest and most complete ontology available that meets your requirements, and know that there are no truly complete ontologies. Within art history, prefer not to use Iconclass, because you have to become an expert in this classification system before you can work with it effectively. Rather, use the Getty Vocabularies, and accept their incompleteness despite their comprehensiveness. Since yourself and other possible users of your dataset are most likely domain experts, there will be considerable latitude for understanding.

For example, if you have an interest in fossil shark teeth (see chapter 3), you will probably know that these natural objects [Appendix D.7] were not identified as such in the seventeenth century. Whether a specimen is annotated as *glossopetra* (tongue stone),<sup>1340</sup> *vischtonge* (fish tongue),<sup>1341</sup> or shark tooth,<sup>1342</sup> chances are you will find it anyway. This is a prerequisite for doing (art) historical research in general, regardless of the tools used.

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<sup>1339</sup> Ontology refers to “a branch of metaphysics concerned with the nature and relations of being.” <https://www.merriam-webster.com/dictionary/ontology> (accessed June 18, 2021). An ontology in the field of information science is also, as in philosophy, a collection of concepts and categories, provided with properties and relationships between them.

<sup>1340</sup> Pliny, *The Natural History*, 37.59. See also Gessner, *De omni rerum fossilium genere* (Zurich: 1565, fol. 162v); de Boodt, *Gemmarum et lapidum historia* (Hanau: 1609, p. 171).

<sup>1341</sup> Rijks, “Catalysts of Knowledge,” 210 & 220.

<sup>1342</sup> Steno, *Elementorum myologiae specimen* (Florence: 1667, tab. IV).

With an eye toward making your dataset useful to others, and thus ensuring interoperability, it is often suggested to use standards such as Linked Open Data (LOD) and the Semantic Web. More often than not, this will create significant technical overhead without any added value. However, I would recommend to collaborate closely with an information technology (IT) specialist from the beginning, who can help with the technical requirements when setting up the dataset in a manner that for instance makes it easy for others to convert your dataset into other formats. Since there are many standards, such a conversion is almost always necessary, and will not prevent other researchers from making use of your work.

Do use free text fields, because in a large dataset such fields are the easiest to search without losing information density, and because it is much easier to describe an entity than to classify it. The value of such fields was already established in the preliminary study of the Rijksmuseum dataset (see chapter 3), where mainly titles and descriptions were queried. The constcamer dataset documents through free text fields the iconographic themes that occur within the constcamer catalogue, without specific identifiers assigned to them. For example, searching for “Holofernes” in Ninox returns eight entities – including Judith, Judith and Holofernes, and Judith with the Head of Holofernes – and thus all occurrences of the theme in which Holofernes appears within the dataset.

When choosing a database management system, avoid custom software. There are numerous high-quality and flexible software solutions available on the market, and the investment in developing time and cost is rarely worth it. At the other end of the spectrum, try to avoid using Microsoft Excel, which is a short-term solution but a long-term pitfall. Quickly your (relational) data model will be too complex to store in Excel. The application chosen for this project is Ninox, but it could just as well have been another no-code

development platform (NCDP). The trade-off is always convenience for the IT specialist on the one hand and yourself on the other. The ease of data entry for the researcher, who is the main stakeholder, will be the deciding factor in many cases.

In hindsight, Ninox was the appropriate tool for my purposes, but still I would have done a few things differently if I were starting over. For example, I began by annotating the paintings depicted in constcamer paintings, since most documentation on this subject was already available. I treated each painting as a unique entity, even if it was only partially visible, or if only the back was shown. This resulted in entities such as *Back of a Painting* or *Part of a Painting*, whose instances could have been grouped together under one and the same title. In this case, consistency led to inefficiency and unnecessary loss of time, which is best avoided.

The choice for an open database schema, inspired by the entity-attribute-value (EAV) model, resulted in a flexible schema that could be adapted to my needs during the annotation process. This enabled me to deal with exceptions to the rule and unforeseen issues. Based on my experiences with the *Back of a Painting*, for example, I subsequently created several entities that represent groups of entity types (e.g. musical instruments), and identified unique entities only when it was useful for me to do so (e.g. the lute). This way I could work faster, from general to specific, and thus annotate more.

Many aspects recorded in the dataset are debatable. They are presented oversimplified, as facts, because the structure of databases leaves little room for ambiguity.

It can therefore be difficult to accommodate uncertainties, such as those of dating.<sup>1343</sup>

Although the notation of dates could be structured, with a lower and upper limit allowing for

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<sup>1343</sup> See “Curators’ Perspectives – Objects and Time in digital Collections” in Kräutli, “Visualising Cultural Data,” 76–83. Regarding the inconsistency of date descriptions in the digital collection (2016) of the Victoria and Albert Museum (V&A), see in particular Table 2.1 on page 77, which lists seventy-two variants.

the entry of a date range, this does not alter the reality that exact dates are often unknown. The convention used made the dataset workable for me, but with the caveat that the values entered cannot be copied without reservation – which is probably true for most other values as well.

The dating of the *The Interior of a Picture Gallery* [Cat. No. 41], for example, is described on the website of the Courtauld Institute of Art, its current owner, as “circa 1640” and converted by me into a lower limit of “1635” and an upper limit of “1645.”<sup>1344</sup> Further research nevertheless made it clear that work on this constcamer painting began in the 1620s or even earlier by the Francken family’s workshop, while Teniers II only made some additions around 1640 (see chapter 10). For practical reasons such nuances were not always included in the dataset.

In addition to an IT specialist, I suggest to seek counsel from a legal advisor early on. If you plan to share your source material (digitally), sooner or later you will run into the issue of (image) copyrights, which can become costly and time-consuming to manage. Although this may not necessarily be a problem, depending on the material you are working with, it is advisable to establish and implement a strategy for dealing with copyrights.

These concerns are based on my personal experiences, and may be of use to those in a similar situation. There are best practices for using digital tools, which I have outlined, but their application within a given project will guide the choices to be made. The key is to remain pragmatic and flexible, as many assumptions can be made from a theoretical or biased point of view that do not take into account the practicalities and many snags.

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<sup>1344</sup> <http://www.artandarchitecture.org.uk/images/gallery/efe12626.html> (accessed June 18, 2021).

## Recommendations

Annotating the telescope made it possible to determine that probably twenty-two of them are depicted in the catalogued constcamer paintings, and to compare them pictorially.

However, this is not an absolute number, nor does it reveal *why* these optical instruments were included. Contextualization will lead to the approximation of such meanings, which is not fixed but open to interpretation. How can aspects of signification be captured in a dataset, without giving the impression that the identified possible meanings are absolute truths? And when the notion of truth is conceptually absent, how can it be practically captured at all?

Databases were initially developed for purposes other than humanistic research. They excel at computations using statistical analysis, where context is not a decisive factor, which is not a property particularly useful to art historians. The database implies a collection of quantifiable data, an enumeration of things that *are* (i.e. declarative), not of things that *could be* (i.e. relative). To first become aware of this distinction and then introduce a level of uncertainty and ambiguity into the dataset, it might be necessary to reconceptualize the dataset and instead speak of an “idea-set” or “concept-set,” and ultimately a “knowledge-set.” This would primarily require a technical solution, to which artificial intelligence (AI) in particular could contribute.

Drucker recently addressed similar problems with regard to information visualization, and sought to nuance such visualizations, and thus their interpretations, by modeling understanding to make graphical arguments. As Drucker put it, “Finding alternatives that counter the certainty of computation with the generative dialogue of interpretation is

crucial.”<sup>1345</sup> While Drucker was mainly concerned with the display of data based on phenomena,<sup>1346</sup> I would recommend focusing on the data, one step less removed from the phenomena, and exploring new avenues of treating and adjusting them to the needs of humanities research.

Much more is currently documented in the constcamer dataset than could be discussed within the scope of this research. Consequently, countless subjects, objects, and concepts present themselves for further study. The three case studies discussed in Part IV of this thesis may serve as model examples in this regard. The result of my “cherry-picking” approach is that the dataset contains numerous unmentioned identifications of, among other things, previously unnoticed iconographic themes of pictures-within-pictures.<sup>1347</sup> At the same time, the constcamer dataset could easily be expanded by other scholars, with respect to the constcamer genre or, for example, the broader context of early modern Netherlandish pictorial culture.

In conclusion, I would strongly urge to improve the digital literacy of art history students, so that the next generation of art historians can make full use of all the inspiring and innovative developments in the rapidly changing landscape of computer science.

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<sup>1345</sup> Drucker, *Visualization and Interpretation*, 58.

<sup>1346</sup> Drucker, 76.

<sup>1347</sup> For example: *The Liberation of Saint Peter in The Interior of the Picture Gallery of Peter Linder* [Cat. No. 73], which is similar to paintings with the same iconography included in Cat. Nos. 67 and 111.

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