CNA Studies
February 2024

Thinking Small:
Dutch Art to Scale

Center for Netherlandish Art MFA Boston

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▶ Editors

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▶ About This Publication

CNA Studies is a digital publication series produced by the Center for Netherlandish Art (CNA). Promoting scholarship is core to the mission of the CNA, a research center located in the Museum of Fine Arts, Boston. The vision for the CNA is to be an international leader in the field of Dutch and Flemish art through the quality of its programs and sustained commitment to excellence.

This series documents and disseminates research activities facilitated and supported by the CNA. In many cases, this series will produce editions dedicated to the work of students and emerging professionals, providing a publishing opportunity in the early stages of their careers. As a digital publication, CNA Studies promotes access to scholarship. Any scholar, student, or enthusiast of Netherlandish Art with internet access can read about the projects and findings of its activities, regardless of location, on the CNA webpage at **mfa.org/collections/center-for-netherlandish-art**. Publishing digitally allows the CNA to shorten the production timeline so that new research can reach audiences quickly. You can look forward to future volumes in the series in the months and years ahead.

▶ Exhibition

This publication accompanies the exhibition “Thinking Small: Dutch Art to Scale” on view at the Yale University Art Gallery from February 17 to July 23, 2023, and the Museum of Fine Arts, Boston from November 18, 2023 to November 3, 2024. A collaboration between the Center for Netherlandish Art at the MFA, the Yale University Art Gallery, and faculty and students at Yale, this exhibition explores an intriguing selection of objects from the 17th-century Netherlands that were designed to elicit slow, intimate, and contemplative engagement on the part of their original audiences.

“Thinking Small” is part of the Center for Netherlandish Art’s Innovation Gallery program in which the CNA provides a platform to academic partners to share cutting-edge scholarship with broad audiences in Boston. Guided by the expertise of the MFA staff, future museum professionals, professors, and art historians learn the practical and scholarly skills required to create exhibitions and work in cultural institutions.

This third exhibition in the program was curated by four students in Yale University’s Department of the History of Art: Adam Chen, Ekaterina Koposova, Renata Nagy, and Joyce Yusi Zhou. Marisa Anne Bass, professor in the History of Art at Yale, served as faculty mentor. The exhibition began with a graduate seminar taught by Professor Bass in spring of 2021. In that period of isolation, when museums were closed and collections inaccessible due to the COVID-19 pandemic, the appeal of “thinking small” was palpable. The exhibition that emerged from the seminar argues for attending to the ways that the history of Dutch art intersects with histories of thought. Above all, it understands works of art across media as sites of connection.

Acknowledgments

The curators and authors of this catalogue owe deep gratitude to all the individuals who brought this exhibition and publication to fruition. First and foremost are the lenders to both exhibition venues: the MFA, the Yale University Art Gallery, Yale's Beinecke Library, Yale's Medical History Library, and a private collector. They are also grateful for the support and expertise of conservators and curators at both the Gallery and the MFA: Theresa Fairbanks-Harris, Anne Gunnison, Courtney Harris, Larry Kanter, Antien Knaap, Annette Manick, Rhona MacBeth, Jessie Park, Freyda Spira, Christine Storti, Gerri Strickler, and Benjamin Weiss.

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Introduction

by Adam Chen

The philosopher René Descartes (1596–1650) described Amsterdam in 1631 as a place where he could pursue his "daydreams" undisturbed.[1] With nearly everyone else in the city occupied with commerce, Descartes wrote that no one would stop him and interrupt his thoughts. While the Netherlands was the center of economic and political projects on a global scale during the 17th century, many Dutch works of art from this period provided a means by which to consider ideas on a small scale, enabling the personal contemplation that Descartes so valued.

Take as an example a nautilus shell engraved by the Amsterdam shell carver Jan Bellekin (1636–?) around 1660, now in the Yale University Art Gallery's collection (Fig. I-1). The shell, a precious natural specimen that was harvested and polished by laborers a world away in the South Pacific, came to the Netherlands as an object of the trade that Descartes saw all around him. It is now mounted as a cup—as were many nautilus shells in the 17th century—but the current silver-gilt mount postdates Bellekin's carving by at least a century. What makes this shell exceptional is the nature of the imagery on its surface and the difficulty of parsing its relation to the natural specimen on which it appears. Bellekin has incised a multitude of seemingly incongruous images into the mother-of-pearl: a caricature of a surgeon performing an operation on a foot, two peasants gambling in a tavern, a collection of insects, a pious couple strolling before a church, and a jarring scene of sexual assault. Bellekin signs his work on a humble stool in the tavern—a small object as ill-matched to the rare shell as are the subjects that he carved. For the 17th-century collector, the

Figure I-1. Side view of Jan Bellekin, *Nautilus Cup*, about 1660, engraved shell with gilt silver mount, Yale University Art Gallery.

shell was a challenge to reflect simultaneously on natural perfection and human imperfection. However small in scale, its implications are at once weighty and inexhaustible.

Like many works of 17th-century Dutch art, Bellekin's nautilus was produced to encourage close looking and sustained engagement. The shell's finely rendered images, minute details, and lustrous properties prompt viewers to contemplate, scrutinize, and handle the object. They generate a connection with the viewer, encouraging one to ponder the origins of the exotic material or puzzle over the object's program of imagery. The shell produces a particular, scaled relationship between it and its viewers, a relationship that invites us to "think small."

Thinking small describes an action of absorbed engagement—a specific kind of encounter in which the viewer thinks, perceives, and acts differently in response to the artwork. Not every work of Dutch art prompts the kind of engagement that thinking small describes, nor is this a concept that we associate with any one medium, scale, or genre.[2] Many works that invite the action of thinking small are small themselves, but larger works of art also often invite the viewer not to focus on the immediate impact of the image or object as a whole but instead on the details within it. These elements persuade us to think small—to move closer to the object, to linger, and to contemplate.

Thinking small, therefore, is also an act of perceiving in relative scale.[3] Relative scale can be a matter of physical size or implicit in the associations that a given work of art invites. The nautilus shell carved by Bellekin, for example, is a relatively small object, yet its naturally perfect spiral shape, moralistic themes in its imagery, and precise depictions of insect specimens call to mind an all-encompassing divine order. Thinking small is a critical element of the artist's process—how he or she decided to work with relative scale in mind—as well as the reception of the object, involving how the viewer's body and mind respond to small or intricate works with a special kind of focused attention. Accordingly, applying the interpretive lens of thinking small illuminates the wide range of experiences that involved close engagement on the part of viewers in the early modern Netherlands. From the technical observation of maps and navigational diagrams, to the emotional act of meditating with a death medal made to commemorate a loved one, to the microscopic investigation of specimens by practitioners of natural history, thinking small was especially important to the spheres of knowledge production and collecting in the Netherlands, both to the creation of works of art and to their appreciation.

Thinking small encompasses not only an act of perception but also the process by which artists transform the materials with which they work. The Yale nautilus cup features a specimen prized in the 17th century, as today, for its iridescent beauty. Nautilus shells' multicolored luster encourages one to carefully examine the shell, feel its surface, and hold and manipulate the object in the light. This iridescence, however, is not naturally visible on the exterior of the shell and must be actively revealed by artists and polishers. In his text *The Ambonese Curiosity Cabinet*, the 17th-century natural historian Georgius Everhardus Rumphius described how to process the surface of nautilus shells prior to engraving them. After soaking the shell in acid for almost two weeks, one should vigorously scour the surface "until the mother-of-pearl has come through everywhere."[4] Exposing the shimmering surface of a nautilus cup was a long and multifaceted process—a significant effort poured into the creation of a relatively small item. Although viewers may not have always understood the processes involved in polishing shell specimens, they reacted to the end result. The shell's strange, mutable surface mesmerizes viewers, encouraging them to visually and haptically engage with the object and prompting them to imagine its history.

In other cases, the invitation to think small depends on refined details that reveal themselves only through close inspection. Like the iridescent surface of the nautilus shell, minute details draw the eye in and inspire viewers to engage at an intimate level. To perceive the intricacy of detailed images properly, the viewer needs to move closer to the object and scrutinize every inch, marveling at the skill and dedication of the object's maker. Indeed, the labor required to render details compels the artist to spend longer working on the piece, which, in turn, gives viewers more information to perceive and encourages viewers to spend more time doing so. On the surface of the Yale nautilus, for instance,

Figure I-2. Back side view of Jan Bellekin, *Nautilus Cup*, about 1660, engraved shell with gilt silver mount, Yale University Art Gallery.

Bellekin carefully engraved almost a dozen insects down to the precise venation patterns of their wings (Fig. I-2). Although the source engravings from which Bellekin worked were not produced using microscopes, he and other artists frequently made use of lenses and magnifying technologies to ensure microscopic precision of detail when representing natural specimens like insects.[5] Bellekin sourced the images of the gambling scene and doctor from a series of prints designed by the engraver Pieter Jansz. Quast (1606–1647).[6] Quast's images, such as *The Foot Operation* (Fig. I-3), incorporate a variety of facial expressions, emotive gestures, and unusual behaviors represented in miniature. Particular details, like the pair of glasses through which the doctor ineptly peers, call to mind the action of seeing, as well as the limitation of sight in guiding knowledge and thought. Moreover, the small yet expressive faces of those observing the surgery evidence an attention to sight lines and sight's capacity to captivate and mesmerize.[7] The figures' engrossed gazes focus on a single point—the surgeon's hands and knife—thus directing viewers' eyes toward the same location. This pointed focus on looking and incising, paired with the ambiguous meaning of the images engraved on the shell, prompts the viewer to engage in an analogous action of examining details and speculating on how the shell itself was carved.

With some forms of Dutch art, the minute becomes all-encompassing. Like Bellekin, many Dutch landscape artists filled their compositions with small details. These details, both real and imagined, often draw in viewers to such an extent that they are invited to imagine they are actually present in the landscape. In a treatise on painting, the artist Gerard de Lairesse (1641–1711) provides careful guidelines for how landscape painters should incorporate details like figures, stones, or even the particular types of leaves on the trees. Arguing that they are essential to landscape paintings, De Lairesse criticized artists who could paint landscapes but not properly populate them with detailed ornaments.[8] These elements contribute to a sense of verisimilitude, a critical component for viewers to imagine the image as reality. After all, as De Lairesse put it, "What can be more satisfactory than to travel the world without going out of doors; and, in a moment, to journey out of *Asia* into *Africa*, and from thence back to *America*, even into the *Elysian Fields*, to view all the wonders, without danger or incommodity from sun or frost?"[9] By getting lost in details, viewers become absorbed in the world of the image. With some objects, thinking small is more than just a way of perceiving a work of art; it is also a vehicle for traveling vicariously and seeking to understand places both near and far.

Figure I-3. Salomon Savery after Pieter Jansz. Quast, *The Foot Operation*, about 1630–1645, engraving, Rijksmuseum.

Beyond illusory experiences of travel, thinking small was also a means of comprehending the vastness of the world. The exotic origins of the carved nautilus, for example, allowed vast distance to be appreciated by examining and meditating on a small object. Nautilus are native to the Indonesian archipelago, and transporting them to the Netherlands involved several months of maritime travel. The allure of the nautilus' foreign origins appealed to Dutch shell collectors.[10] Texts consumed by collectors, including Rumphius's *The Ambonese Curiosity Cabinet*, provided information about how to distinguish shell species, as well as how the shells are processed and used by natives of the East Indies. Building off metaphorical precedents dating back to antiquity, Rumphius wrote that nautilus shells have the appearance of "something of a round little boat," and refers to parts of the shell as the "stern" or "keel."[11] Considering the shell as a kind of miniature ship would have called to mind the object's journey from the South Pacific, transforming the shell into a manifestation of its global voyage. Other forms of media, including atlases, globes, and landscapes, likewise shaped how Dutch men and women pictured the vastness of the world by providing miniaturized representations of distance. These relatively small objects invited viewers to consider the world's furthest distances, exemplifying the expansive power of thinking small.

The analogy of a shell's travels to the circulation of Dutch ships around the globe reflects another facet of thinking small: the likening of part to whole. The Dutch poet Jacob Cats (1577–1660), for example, compared running a household to the administration of a commonwealth. Although women were not allowed to participate in the church or civil government, they still "must keep a kingdom, a land, an entire state," wrote Cats. As he put it succinctly, "One may say: a house is a kingdom."[12] Comparing small things to larger systems was a common interpretive move in the early modern Netherlands. By focusing on the small, one could make sense of complex ideas and institutions. Shell specimens like Bellekin's carved nautilus were considered a means of discerning the divinely designed nature of the universe. In his poem "De Zee-straet," Constantijn Huygens (1596–1687) uses wordplay to associate shells with creation and, by extension, with God as divine creator:

> There is no better way to pass the time well
>
> Then by collecting shells that spark desire;
> and don't say 'they're just shells [*schelpen*].'
>
> Take a letter out, and they are creators
> [*schepen*].[13]

Similar to many natural historians of the 17th century, the poet Huygens understands the examination of natural specimens like shells and insects to be both a means of understanding God's act of Creation and a source of artistic inspiration. He goes on:

> [...] The shell is, like the ant, a creation of
> God's hand;
>
> And both creations are equally full of
> wonder:
>
> Theirs are secrets about which Art has only
> just begun to thunder.[14]

By closely examining the miniature insects Jan Bellekin carved on the surface of the nautilus shell, viewers are driven to contemplate God's will and the nature of the universe, as well as one's own role in it. After all, as Huygens points out, insects and humans are both works of divine creation, different only in size: "Their joints and members so incomprehensibly deft/Yet different from ours only in scale and heft."[15]

Beyond carved shells and natural history illustrations, other Dutch objects like commemorative death medals also inspired viewers to contemplate eternity. Bearing biblical inscriptions like "The day of death is better than the day of birth,"[16] these medals prompted those holding them to reflect on their own fleeting earthly existence and hope for salvation in the afterlife. By thinking small, viewers could imagine the everlasting.

Descartes came to the Netherlands in search of a contemplative refuge, a place where free thinking was possible. When he arrived in Amsterdam, he not only found a city of tolerance willing to indulge his "daydreams" but also a culture producing works of art that encouraged the very kind of introspective contemplation he sought. One form of this engagement—thinking small—is above all a mode of relating to an image in which proximity, time, and scale matter. As the following three chapters explore, to think small involved "sensing the small"

not only through sight but also through touch. It involved “miniaturizing the distant”—the shrinking of vast terrestrial spaces onto the small surfaces of maps or landscapes. And it involved “observing the minuscule,” the focused examination of natural specimens at an intimate or even microscopic scale. Artists and consumers of art alike thought small throughout many facets of life in the early modern Netherlands. Indeed, even today, the minute can prompt us to rethink the vast world around us.

Notes

[1] *"Au lieu qu'en cette grande ville où je suis, n'y ayant aucun homme, excepté moi, qui n'exerce la marchandise, chacun y est tellement attentif à son profit, que j'y pourrais demeurer toute ma vie sans être jamais vu de personne … Le bruit même de leur tracas n'interrompt pas plus mes rêveries que ferait celui de quelque ruisseau."* René Descartes to Jean Louis Guez de Balzac, May 5, 1631, in André Gombay, ed., *Œuvres Complètes de René Descartes* (Charlottesville, VA: InteLex, 2001). Translation in C. Adam and P. Tannery, eds., *Electronic Enlightenment Scholarly Edition of Correspondence*. https://www.e-enlightenment.com/item/descreCU0030031a1c/?letters=decade&s=1630&r=16.

[2] Our concept of thinking small is indebted to the work of Hanneke Grootenboer, whose recent monograph, *The Pensive Image* (Chicago: University of Chicago Press, 2020), argues that art itself is a form of thinking.

[3] For an introduction to scale, see Joan Kee and Emanuele Lugli, "Scale to Size: An Introduction" in *Art History*, 38 (2015): 250–66, and Susan Stewart, *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection* (Durham, NC: Duke University Press, 1993).

[4] Georgius Everhardus Rumphius, *D'Amboinsche Rariteitkamer* (Amsterdam: Francois Halma, 1705). Translation from Georgius Everhardus Rumphius, *The Ambonese Curiosity Cabinet*, ed. & trans. by E. M. Beekman (New Haven, CT: Yale University Press, 1999). See also Karin Annette Möller, *Schimmern aus der Tiefe* (Petersberg, Germany: Imhof Verlag, 2013), 90, 148–49.

[5] Bellekin copied the insects from the engraving series *Diverse Flying Insects* (1630) by Nicolaes Visscher (1618–1709), who had himself copied the images from the artist and polymath Jacob Hoefnagel (1575–1630).

[6] See W. H. van Seters, "Oud-Nederlandse Parelmoerkunst," *Nederlands Kunsthistorisch Jaarboek* 9 (1958): 189–90.

[7] The Dutch poet Constantijn Huygens (1596–1687) described the vast expressive power of small faces with respect to Rembrandt van Rijn's oil painting *Judas Returning the Thirty Pieces of Silver* (1629). Rembrandt, Huygens says, "devotes all his loving concentration to a small painting, achieving on that modest scale a result which one would seek in vain in the largest pieces of others." See Huygens, "On Rembrandt and Lievens" in Ernst van de Wetering, ed., *The Mystery of the Young Rembrandt* (Wolfratshausen, Germany: Edition Minerva, 2001), 396.

[8] Gérard de Lairesse, *The Art of Painting, in All Its Branches*, trans. John Frederick Fritsch (London: printed for the author, 1738), 272–75.

[9] Lairesse, *Art of Painting*, 266.

[10] Claudia Swan, "The Nature of Exotic Shells," in *Conchophilia* (Princeton, NJ: Princeton University Press, 2021), 27–40.

[11] Rumphius, *D'Amboinsche Rariteitkamer*, 64. The Hellenistic poet Callimachus (3rd century BC) compares a nautilus shell to a ship with sails. See Marisa Bass, "Shell Life, or the Unstill Life of Shells," in *Conchophilia*, 98–99.

[12] *"Gij moet een vorstendom, een land, een gansen staat / … Zodat men zeggen mag: Een huis een koninkrijk."* Translation from Martine van Elk, *Early Modern Women's Writing* (New York: Palgrave Macmillan, 2017), 42.

[13] *"Maer beter besigheit kan u den Tijd wegh helpen: / Raept Schelpen, die het lust: en seght niet, 't Zijn maer Schelpen: / Neemt eene letter uyt, 't zijn Schepen* […]" Constantijn Huygens, *De Zee-straet van's Graven-Hage op Scheveningen* (The Hague, the Netherlands: Johannes Tongerloo, 1667), 25, lines 619–21. Translation by Marisa Bass.

[14] *"[…] Hy is, gelijck die Mier, een maecksel van Gods Hand; / En bei die maeckselen voll van gelijcke wond'ren: / Geheimen die de Konst heft onlanghs op doen dond'ren."* Huygens, *Zee-straet*, 25, lines 630–32.

[15] *"In onbegrijplickheit van Leden en gewricht; / Maer in 't verschill alleen van omloop en gewicht."* Huygens, *Zee-straet*, 25, lines 637–38.

[16] Pieter van Abeele's *Death Medal for Geertruyd van Campe* (1701, Museum of Fine Arts, Boston) bears this inscription from Ecclesiastes 7:1.

Sensing the Small

by Joyce Yusi Zhou

In her autobiography, Anna Maria van Schurman (1607–1678) described a miniature self-portrait that she sculpted in wax:

> The little diamonds around the neck imitated nature so well that people scarcely believed me when I told them they were fake; and I made them see that art could not be distinguished from nature in any other way but by pricking it with a pin.[1]

Van Schurman spent 30 days making this small work. Much of that time was likely devoted to learning the material's properties through laborious trial and error, and above all, touch. As she emphasized in the passage above, her own process produced a remarkable result: a miniature that defied appreciation with the eyes alone. Only by touching the tiny "diamonds" with the prick of a pin, and seeing the soft wax give way, could those who encountered the portrait distinguish between nature and artifice.

Working in a specifically Netherlandish tradition of miniature-making, Van Schurman preserved something fundamental about the affective experiences that objects of intimate scale offer to their users and beholders. Artworks of minute scale not only prompt close looking but also a desire to hold and feel them. Through touch, our perception of an object necessarily changes and, with it, our potential for awareness of the attention and skill that an artist employed to create it.

Anna Maria van Schurman was a Dutch woman of great erudition. The first female university student in the Netherlands (and possibly in all of Europe), she achieved excellence in art, music, literature, and foreign languages. Though her literary output was far greater and much more publicized, Van Schurman was also a distinguished artist of small, intricate artworks such as miniature portraits, diamond-point engravings, and delicate paper cuttings—categories of art that were often exchanged between friends, admirers, and collectors.[2]

The appreciation and contemplation of small works through touch was an essential component of early modern European collecting practices.

The Antwerp collector and connoisseur Abraham Gorlaeus, for instance, professed to a friend his frequent desire "to examine closely and to feel by hand" the works in his possession.[3] Coins, medals, and other small collectibles were often kept in small boxes or cabinets designed to house them (see Fig. 1-1). Their smallness was a prompt for intimate and contemplative engagement. While neither the making nor the appreciation of small-scale works was exclusive to the Netherlands, the Dutch context was unique in that collecting was not a practice solely restricted to the wealthy elite. Anyone could have been a collector of something, whether it was a letter from a loved one, a unique insect or flower, or a popular print.

Medals commissioned upon the death of an individual were one category of small collectible that allowed collectors to take personal histories to hand. Serially produced and customized in small batches, these medals were commonly distributed at funerals of the elite in remembrance of the deceased. Two closely related examples survive today in the Yale University Art Gallery (Fig. 1-2) and the Museum of Fine Arts, Boston (Fig. 1-3).[4] Both medals have a nearly identical obverse that features a laurel-crowned skull and bones topped by an hourglass, which is further flanked by two scythes and a pair of wings: one of a bird and

Figure 1-1. Jacques de Gheyn II, *Portrait of Abraham Gorlaeus at Age 52*, 1601, engraving, Rijksmuseum.

Figure 1-2. Possibly after Pieter van Abeele, *Death Medal for Ariana Toffelen*, 1687, silver, Yale University Art Gallery.

Figure 1-3. Pieter van Abeele, *Death Medal for Geertruyd van Campe*, 1701, silver, The Maida and George Abrams Collection, Museum of Fine Arts, Boston.

another of a bat.[5] A scroll occupies the top of the oval, which is inscribed with a Dutch rendition of Revelations 14:13—"Blessed are those who die in the Lord because they rest from their labor."[6] The lower half of the obverse features a circular panel flanked by acanthus leaves, which is further customized with the phrase *homo memento mori* (remember that you will die), reminding the viewer of the transience of human life.

Though the design of the obverse was more or less standardized, the reverse of each medal is personal. The two examples respectively commemorate the lives of Ariana Toffelen (d. 1687) and Geertruyd van Campe (d. 1701), two 17th-century Dutch women of elevated social status. Toffelen's medal further describes her as the wife of a plantation owner in the former Dutch colony of Curaçao. A contemporary watercolor by Gesina ter Borch (1631–1690) allows us to better understand the histories of encounter and colonization associated with this medal (Fig. 1-4). Ter Borch never visited Curaçao herself, but family connections inspired her imagination of the place. She depicts her niece, Hillegonda Louise Schellinger, who was born in Curaçao in 1674, in a fanciful

Figure 1-4. Gesina ter Borch, *Hillegonda Louise Schellinger in Curaçao*, 1680, watercolor, Rijksmuseum.

Caribbean landscape alongside birds of paradise, enslaved African laborers, and a fantastic feathered parasol.[7] Like Toffelen, Schellinger is primarily defined by her association with the distant locale of Curaçao. Neither the medal nor the watercolor offer an authentic representation of life in the Dutch West Indies. Their value lay not with their accuracy but with the connections that they established across distance and between loved ones.

Coins, unlike commemorative medals, belonged to the realm of commercial exchange, but even they were occasionally personalized. A few rare examples of a genre of object called a screw thaler (*schroefdaalder*) survive from the 17th-century Netherlands (Figs. 1-5 and 1-6).[8] Created from a hollowed coin split down the middle of its edge, a screw thaler twisted open to reveal hidden compartments that might hold custom-made portraits or miniature engravings.

Figure 1-5. Amsterdam School, exterior of a 17th-century Dutch screw thaler (*schroefdaalder*).

Figure 1-6. Amsterdam School, *Double Portrait of Hendrick Hudde and Anna Roch*, about 1648, oil on silver, tondo, the Rose-Marie and Eijk van Otterloo Collection.

Screw thalers, like medals, were often made to honor special occasions, such as weddings or christenings; however, unlike medals, each screw thaler was unique.[9] One extant Dutch example opens to reveal the likenesses of Hendrick Hudde (1619–1677) and Anna Roch (1624–1717), a well-to-do couple from Amsterdam who likely commissioned the object on the occasion of their marriage in 1648 (Fig. 1-6).[10] The coin (Fig. 1-5) that houses the portraits is a screw thaler from almost three decades prior (1620) minted in the Dutch province of Overijssel, from which Hudde's family originated.[11] As a highly personalized record of history across both time and place, this object was subsequently passed down within the Hudde-Roch family for more than 350 years.[12]

We can begin to understand the original contexts in which small artworks like death medals and screw thalers were appreciated by examining a painting by Cornelis Norbertus Gijsbrechts (1630–1683; Fig. 1-7).[13] Within Gijsbrechts's 1663 *Trompe l'oeil*, 17th-century viewers may have recognized items resembling their own collections at home. Some may have wanted to move closer to attempt to decipher the obscured text, or even try to reach out and remove one of the papers appended to the door. Collecting cabinets akin to the one that Gijsbrechts depicted were intimate spaces in which objects invoked both private introspection and active contemplation of the wider world. In the painting are eyeglasses, handwritten letters, stacks of coins, and a newspaper report of a victory—reminders of the relationships that the individual collector has developed with the external political and economic spheres. Though they may seem trivial and haphazardly assembled, such objects would have held significance for their owner.

Figure 1-7. Cornelis Norbertus Gijsbrechts, *Trompe L'Oeil*, 1663, oil on canvas, The Maida and George Abrams Collection, Museum of Fine Arts, Boston.

By playing with scale and creating intricate details on a small surface, Dutch artists not only encouraged their audiences to examine the objects through a multitude of senses but also left impressions of their own skill and creativity. Jan Lievens's (1607–1674) etching of a bearded man in a fur-collared coat (Fig. 1-8), for example, offers a glimpse into the artist's thought process. Known as "tronies," these small-scale heads or busts of anonymous or fictive figures with individualistic physiognomies are actually generalized caricatures, as opposed to portraits of specific individuals. This genre of miniature prints was highly coveted among 17th-century Dutch collectors because they offered miniaturized impressions of the artist's hand and mind at work.[14] A rendition of this etching appears at the center of Gijsbrechts's *Trompe l'oeil* discussed previously. In his painting, Gijsbrechts added his own signature to the bottom right corner of the painted print, making the presence of his hand explicit.

Figure 1-8. Jan Lievens, *A Grimacing Man* (A Man with Fat Lips) , mid-17th century, etching, Harvey D. Parker Collection, Museum of Fine Arts, Boston.

Figure 1-9. Jan van de Velde, *Spieghel der Schrijfkonste* (The Mirror of the Art of Writing), about 1609, etching and woodcut, Museum of Fine Arts, Boston.

Traces of an individual's hand are marks both personal and intimate, and have been considered as such since classical antiquity. Handwritten words were thought to be capable of conveying a message from the writer's mind, which materializes through the movements of one's fingers across the page.[15] Calligraphic manuals, such as Jan van den Velde's (1568–1623) 1605 *The Mirror of the Art of Writing (Spieghel der Schrijfkonste)*, provide such access to the artist's mind via the moving hand (Fig. 1-9). By memorizing and internalizing the different scripts in the manual, a master calligrapher could switch between hands according to the nature of his text. In doing so, the inner workings of his or her memory emerge through the subtly changing marks and strokes on the page.[16]

By "thinking small," Dutch artists and collectors revealed how the reduction of scale prompted deep introspective thinking. Like Van Schurman's wax portrait, which engendered intrigue through its ability to remain hyperrealistic despite its smallness, objects in the early modern Dutch collector's cabinets highlight the virtue of meditating on the question of relative scale. In doing so, they not only prompted their owners and handlers to engage in self-reflection but also encouraged the contemplation of other worlds and places far beyond the Netherlands.

Notes

1 *"[…] en (dat ik 'er van zijn ydele optoojing dit nog by doe) de diamantjes die om den hals waren, aapten (door mijn nieuwe uitvinding) de natuur zodanig na, datmen my naulijks geloofde wanneer ik het tegendeel zeide: en ik deed haar zien dat men de konst van de natuur niet anders kon onderscheiden, (doen my dit een zeer verstandige Gravinne van Nassouw aanvergde) als dat men een derzelve met een speld doorstak."* Anna Maria van Schurman, *Eucleria, of uitkiezing van het beste deel, waar in vertoont wert een kort begrip van haar leven, als mede veel hooftstukken van den godsdienst grondig werden verklaart* (by Jacob vande Velde, 1684), 28. Pieta van Beek and Anna-Mart Bonthuys, *The First Female University Student: Anna Maria van Schurman* (1636), 1st ed. (Utrecht, the Netherlands: Igitur, 2010), 142.

2 Katlijne Van der Stighelen, *Anna Maria van Schurman of "Hoe Hooge Dat Een Maeght Kan in de Konsten Stijgen,"* Symbolae Facultatis Litterarum Lovaniensis: Series B 4 (Leuven, Belgium: Universitaire Pers Leuven, 1987); Martha Moffitt Peacock, "Paper as Power: Carving a Niche for the Female Artist in the Work of Joanna Koerten," *Netherlands Yearbook for History of Art / Nederlands Kunsthistorisch Jaarboek* 62, no. 1 (January 1, 2012): 246; Van Beek, *The First Female University Student*, 44, 148.

3 Abraham Gorlaeus, *Dactyliotheca seu annulorum sigillarium quorum apud priscos tam Graecos quam Romanos usus* (Antwerp: publisher not identified, 1601), unpaginated front matter. Translation from Marisa Bass, "Shell Life, or the Unstill Life of Shells," in *Conchophilia: Shells, Art, and Curiosity in Early Modern Europe* (Princeton, NJ: Princeton University Press, 2021), 75–102.

4 Other related 17th-century death medals survive in the Liszt Collection of Art. These respectively commemorate the lives of Magdalena van Leeuwen (1656), Josias Krijger (1673), and Justus de Jonge (1697).

5 The wings are likely deliberately juxtaposed to signify the passage of time both during the day and throughout the night. David Oliver Merrill, "The 'Vanitas' of Jacques de Gheyn," *Yale Art Gallery Bulletin* 25, no. 3 (1960): 9.

6 *"Salich sijn de Dooden die in den Heere sterve[n] want sij rusten van haren arbeit,"* translation by Marisa Bass.

7 Alison MacNeil Kettering, *Drawings from the Ter Borch Studio Estate*, Catalogus van de Nederlandse Tekeningen in Het Rijksprentenkabinet, Rijksmuseum, Amsterdam 5 ('s-Gravenhage: Staatsuitgeverij, 1988), 2: 646.

8 The making of these types of objects seems to have emerged first in 16th-century Germany. Only a few rare examples are known from the 17th-century Netherlands. Ernst Pressler, *Schraubtaler und Steckmedaillen: verborgene Kostbarkeiten* (Stuttgart, Germany: Verlag der Münzen- und Medaillenhandlung, 2000).

9 Melinda Alliker Rabb, "War in Miniature: Models, Maps, Medals, and Sterne's Tristram Shandy," in *Miniature and the English Imagination: Literature, Cognition, and Small-Scale Culture, 1650–1765* (Cambridge, UK: Cambridge University Press, 2019), 133–68.

10 Other comparable Dutch screw thalers include Self-portrait of Johann Philip Lemke (1631–1711) and a portrait of his wife (Rijksmuseum SK-A-4334-1); Portrait of a fifteen-year-old boy, Gerrit Lundens, 1650 (Rijksmuseum SK-A-4337); Portrait of a fifty-year-old woman, Gerrit Lundens, 1650 (Rijksmuseum SK-A-4338); Two portrait miniatures on parchment of Mary Stuart and William III (Museum Rotterdam 11525-A-B); *Schroefdaalder* (screw-thaler) with the portraits of Joost Lewe ter Hansouw (1626–1677) en Petronella Coenders (?–1678) (private collection).

11 Hudde's grandfather, Hendrick Arentsz Hudde (1541–1596), and great grandfather, Arent Rutgersz Hudde (1515–1582), were both born in Overijssel, the Netherlands. Hudde's father, Gerrit Hudde (1595–1647), was likely born in Amsterdam. Johan Engelbert Elias, *De Vroedschap van Amsterdam, 1578–1795, Met Een Inleidend Woord van Den Archivaris Der Stad Amsterdam Mr. W.R. Veder* (Haarlem, the Netherlands: Loosjes, 1903), no. 53, 173.

12 Frederik J Duparc, *Dutch and Flemish Masterworks from the Rose-Marie and Eijk van Otterloo Collection: A Supplement to Golden* (Boston: Museum of Fine Arts, 2021), 142–43.

13 For more on Gijsbrechts, see Celeste Brusati, "Stilled Lives: Self-Portraiture and Self-Reflection in Seventeenth-Century Netherlandish Still-Life Painting," in *Simiolus: Netherlands Quarterly for the History of Art* 20, no. 2/3 (1990): 168–82; Alan Chong, W. Th Kloek, and Celeste Brusati, *Still-Life Paintings from the Netherlands, 1550–1720* (Zwolle, the Netherlands: Waanders Publishers, 1999); S. Ebert-Schifferer, *Deceptions and Illusions: Five Centuries of Trompe l'oeil Painting* (Washington, DC: National Gallery of Art, 2002); Hanneke Grootenboer, *The Rhetoric of Perspective: Realism and Illusionism in Seventeenth-Century Dutch Still-Life Painting* (Chicago: University of Chicago Press, 2006); Olaf Koester, *Illusions: Gijsbrechts, Royal Master of Deception* (Copenhagen: Statens Museum for Kunst, 1999); Alexandra Libby, "Innovation and Identity in Cornelis Gijsbrechts' 'A Hanging Wall Pouch,'" in *Artibus et Historiae* 38, no. 75 (2017): 207–23; Louis Marin, "Representation and Simulacrum," in *On Representation* (Stanford, CA: Stanford University Press, 2001), 309–19; Philip Sohm, "Palettes as Signatures and Encoded Identities in Early-Modern Self-Portraits," *Art History* 40, no. 5 (2017): 994–1025; Victor Ieronim Stoichiță, *The Self-Aware Image: An Insight into Early Modern Meta-Painting*, Cambridge Studies in New Art History and Criticism (Cambridge, UK: Cambridge University Press, 1997); Thijs Weststeijn, Beverley Jackson, and Lynne Richards, *The Visible World: Samuel van Hoogstraten's Art Theory and the Legitimation of Painting in the Dutch Golden Age, Amsterdam Studies in the Dutch Golden Age* (Amsterdam: Amsterdam University Press, 2008); Joy Kenseth, *The Age of the Marvelous* (Hanover, NH: Hood Museum of Art, Dartmouth College, 1991).

14 Dagmar Hirschfelder, "Portrait or Character Head: The Term 'Tronie' and Its Meaning in the Seventeenth Century," in *The Mystery of the Young Rembrandt*, ed. Ernst van de Wetering (Wolfratshausen, Germany: Edition Minerva, 2001), 82–90.

15 Ann Jensen Adams, "Disciplining the Hand, Disciplining the Heart: Letter-Writing Paintings and Practices in Seventeenth-Century Holland," in Peter Sutton et al., eds., *Love Letters: Dutch Genre Paintings in the Age of Vermeer* (London: Frances Lincoln, 2003), 70.

16 Walter S. Melion, "Memory and the Kinship of Writing and Picturing in the Early Seventeenth-Century Netherlands," *Word & Image* 8, no. 1 (January 1, 1992): 48–70.

Miniaturizing the Distant

by Ekaterina Koposova

In August 1663, the French traveler Balthasar de Monconys (1611–1665) ascended the tower of Rotterdam's Church of St. Lawrence in search of a view. He had been touring the Netherlands for two months already, exploring the collections of local art patrons and seeing the sights. Although he found the church itself unremarkable, climbing more than 300 steps to the platform at the top of its tower did not disappoint. From there, he wrote in his diary:

> You can comfortably see the whole city and the country, which seems like a vast meadow watered by an infinity of canals. [...] The city is exactly like the map made of it, and our review of it showed that almost no place was missing from it.[1]

Standing on the platform that the cartographer had likely used as one of his observation points, Monconys compared the view that he encountered with the image that he already knew, and he reveled in the relationship between reality and representation.

The miniature painter Hans Bol (1534–1593) was also no stranger to rooftops or travel. As a refugee of the Dutch Revolt, thinking across distances was a necessity for him. Forced, as his biographer Karel van Mander (1548–1606) wrote, by the "art-hating Mars" to flee his home in the southern Netherlands, Bol settled in Amsterdam in the early 1580s.[2] He worked from nature, creating sketches on which he relied while painting in his studio, even when it meant climbing heights to capture a specific view.[3] The topographical accuracy of his works was admired in his own time, and it can still be appreciated today.[4] A

Figure 2-1. Hans Bol, *View of Amsterdam from the South*, 1589, gouache with gold heightening on vellum, laid on panel, gift of Rose-Marie and Eijk van Otterloo in support of the Center for Netherlandish Art, Museum of Fine Arts, Boston.

particularly salient example is *View of Amsterdam from the South* (1589) with its detailed depiction of the city and the Amstel river from the south (Fig. 2-1). To highlight his commitment to his craft, Bol included the portion of a rooftop in the middle foreground from which we are invited to imagine that this view was made.

View of Amsterdam, a gouache painting unusual in its elongated format, centers on the divergence of scale.[5] At its heart lies the contrast between the painting's subject and its diminutive size: a sweeping landscape on a small surface. To discern the scene and its entertaining narratives, viewers must move near and scrutinize the miniature's details. Close observation reveals both the enduring exactness of Bol's topography and his meticulous technique. Without magnification, each individual brushstroke is scarcely visible. Within this minuscule world unfold scenes of peaceful daily life: couples flirting, peasants busy with unruly cattle, and barges ferrying goods and people. As Van Mander wrote, an arresting landscape appeared as "a little world" that viewers could inhabit with their eyes, imagining themselves into it as a realm of experience.[6] The engrossment of Bol's viewer in the painterly surface is comparable to the artist's prolonged study of the landscape and its inhabitants. A carefully constructed panorama, *View of Amsterdam* allows one to see beyond what is possible in reality.[7] In Bol's delicate handling, close looking becomes the condition for seeing into the distance.[8]

Bol's engagement with the social hierarchy in *View of Amsterdam* is tied to his interest in temporal scale, which he represents as a contrast of *otium* (free, leisurely time) and *negotium* (work time).[9] He impresses with the breadth of his social study, encompassing leisure and labor, the monied and the working classes. The elite playing and courting in the left foreground are at liberty to linger in the lush gardens. They are contained within a pastoral setting, which evokes timelessness.[10] By contrast, the working classes, most prominent in the right foreground, are moving with purpose between the city and its rural surroundings, their hours measured in "merchant time."[11] The barges are especially notable for the efficiency with which this innovative system of transportation connected different parts of the country, enabling faster and cheaper travel, particularly to and from Amsterdam.[12] For skippers, time was money in a very literal sense, because they were not only paid for their trips but also fined for lateness.[13] Human lives, in their turn, are contrasted with nature and architecture, which remain largely unchanged over centuries. The duration of the viewers' immersion in Bol's artificial world may be placed on this spectrum of transience and permanence. Bol conveys the expanse of a landscape on small scale by making the understanding of his image conditional on the investment of time.[14]

Although Bol's *View of Amsterdam* is not a map, it describes a kind of view that Dutch mapmakers excelled at picturing: a coastal profile, where land and water meet.[15] In the early 16th century, the Dutch invented the new genre of pilot guides, navigational manuals featuring maps, coastal profiles, and instructions on how to navigate specific waterways. The 17th-century tradition of Dutch pilot guides was founded by Lucas Jansz Waghenaer (about 1534–1606) and

expanded by Willem Barentsz (1550–1597), whose deaths created a demand for up-to-date "sailors' handbooks," filled by Willem Jansz. Blaeu's (1571–1638) *The Light of Navigation* (1622), first published in Dutch as *Het licht der zeevaeart* (1608).[16]

Functioning as visual anchors in these pilot guides, coastal profiles like the one in Waghenaer's *Descriptio orae maritimae* (about 1592) used geographic markers, such as hills and churches, to represent the shoreline as it would appear from the deck of a ship sailing along the coast (Fig. 2-2).[17] Sailors oriented themselves in space by comparing the coastline before them to the coastal profile, not unlike how Monconys compared map and view from Rotterdam's church tower; however, whereas Monconys was satisfying his curiosity on land, navigators at sea had a more urgent reason for turning to a visual guide: a vital need to know where they were. They could rely on these manuals even when they could not see. "If the lighthouses are no longer burning, then enter from the middle of the sea" runs Waghenaer's advice for sailing into a harbor after nightfall.[18] Viewers who stayed at home sought to imagine those spaces by looking at small-scale representations. The transition from a panoramic landscape like Bol's *View of Amsterdam* to coastal profiles and maps is marked by the shift from detailed to more schematic rendering,

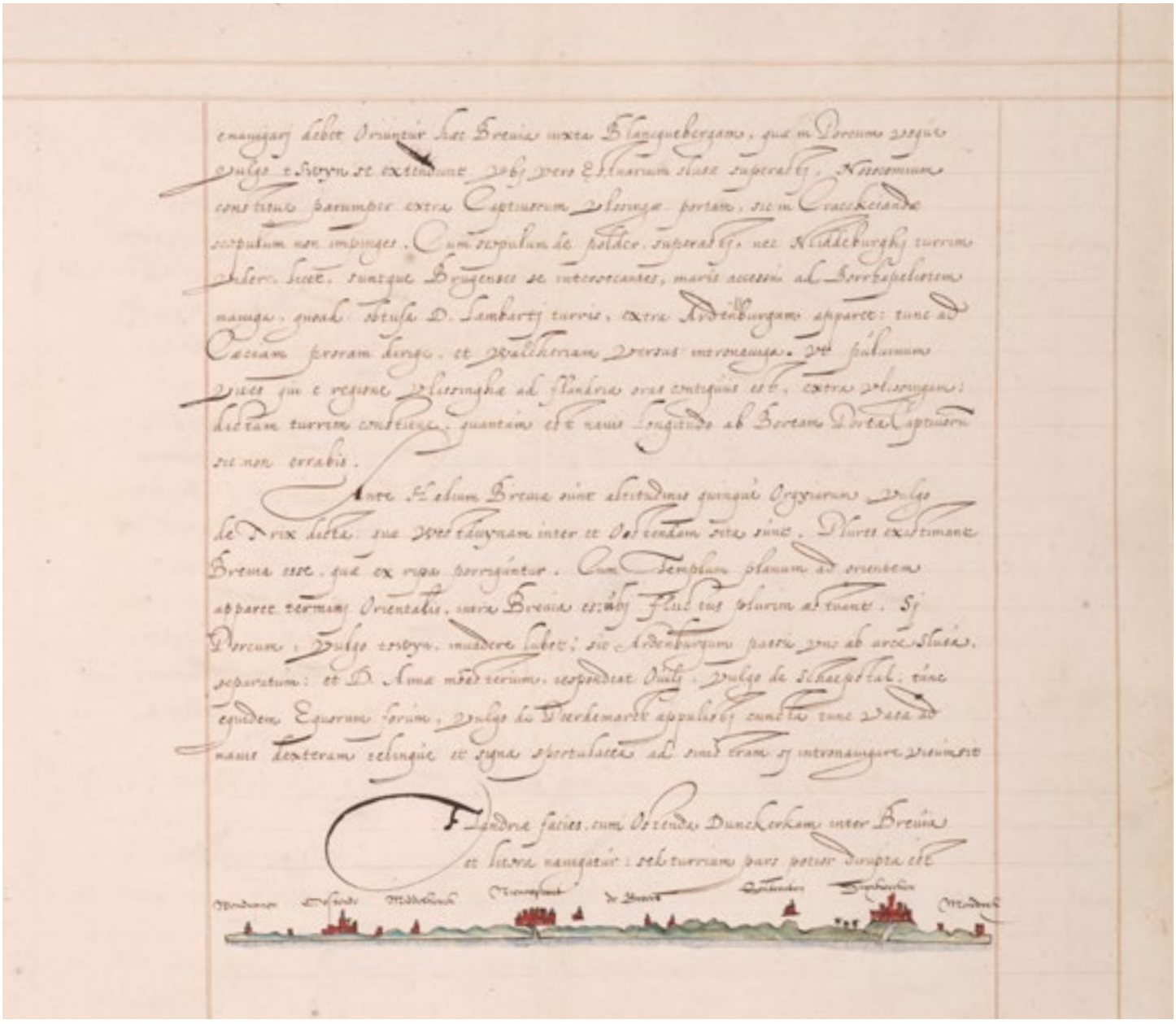

Figure 2-2. Lucas Janszoon Waghenaer, Coastal profile from *Descriptio orae maritimae Frisiae orientalis et occidentalis*, about 1592, pen and ink on paper with hand coloring, Beinecke Rare Book and Manuscript Library, Yale University.

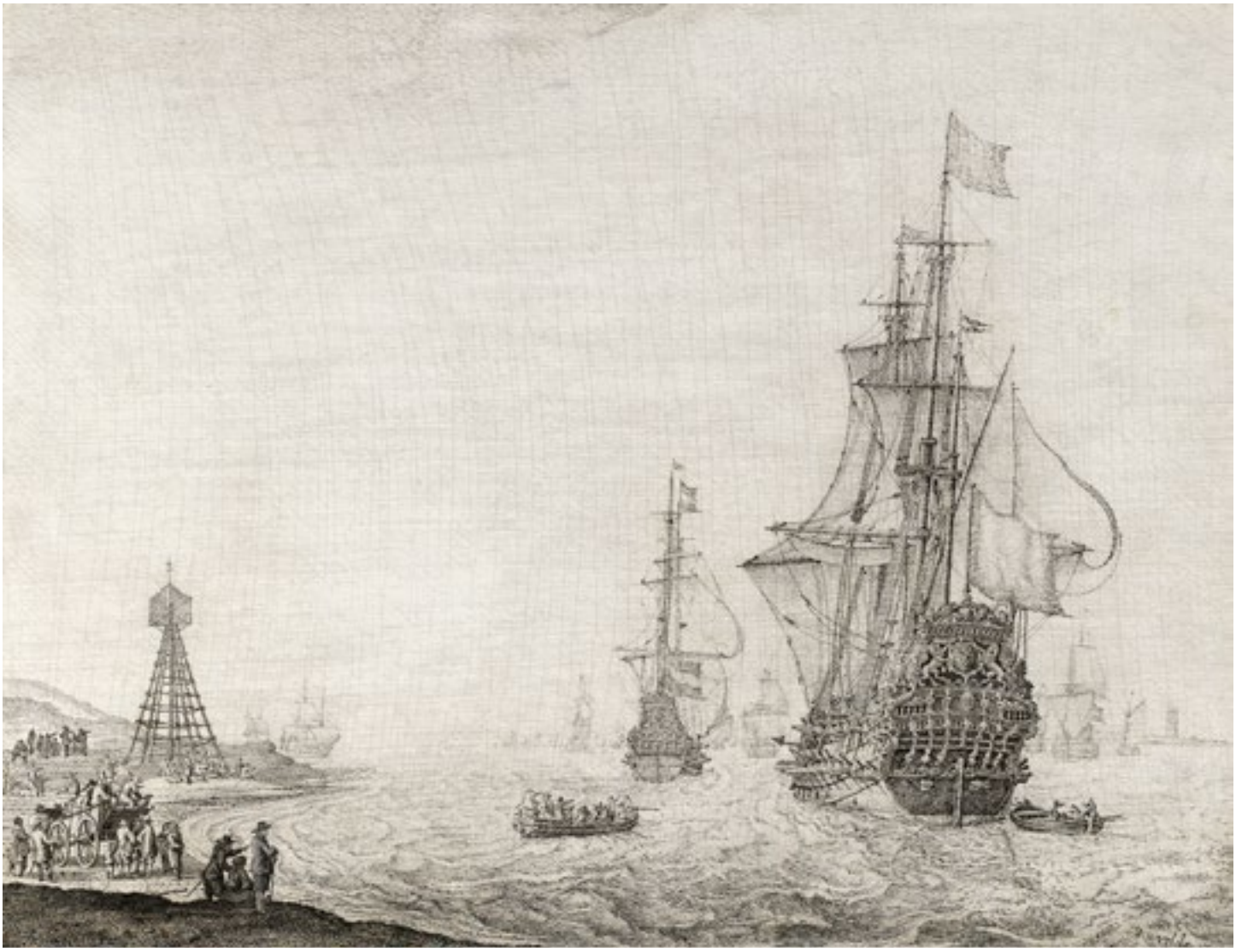

Figure 2-3. Willem van de Velde the Elder, *The Brederode off Vlieland*, about 1645, pen painting on panel, gift of Rose-Marie and Eijk van Otterloo, in support of the Center for Netherlandish Art, Museum of Fine Arts, Boston.

as cartography condenses still larger areas to still even smaller surfaces.

Even more so than Monconys or Bol, Willem van de Velde the Elder (1610–1693) was willing to risk his life in pursuit of a view. Braving the elements, as well as the dangers of armed conflict, Van de Velde traveled with the Dutch fleet during the first two Anglo-Dutch Wars to draw naval battles as they unfolded before him.[19] Upon returning to his studio, he assembled large compositions on the basis of his sketches, creating historically accurate narratives from disparate scenes.[20] In some of his compositions, Van de Velde documented his extensive and dangerous fieldwork by including his own vessel among the fighting ships.[21]

Van de Velde participated in the project of advertising Dutch political, military, and economic might even in his smallest pictures. His *Brederode off Vlieland* (about 1645) exemplifies the innovative technique of "pen-painting" that the artist helped to pioneer and popularize, in which delicate ink lines were worked onto a smooth white ground (Fig. 2-3).[22] *Brederode off Vlieland* relies on its distinctive artistic technique to draw the viewer in with intricate details, then astonishes by a bewildering juxtaposition between the nearly microscopic ink lines and the imposing view that they form. Van de Velde urges his viewers to contemplate the divergence of scale between the technique that they observe and the vast landscape and monumental vessels that he represents.

The artist's contemporaries would have recognized the *Brederode* in Van de Velde's painting as the massive flagship of Admiral Witte de With (1599–1658), which departed from the Dutch North-Sea

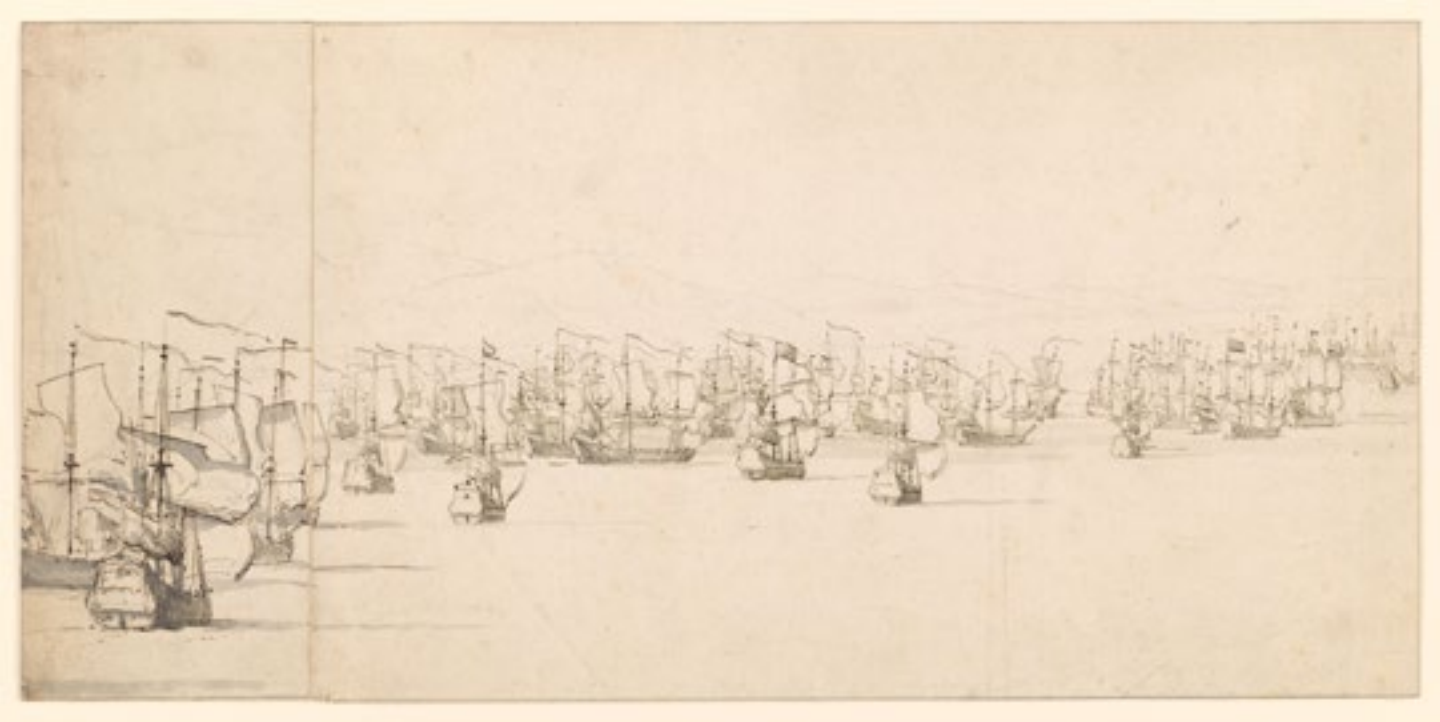

Figure 2-4. Willem van de Velde the Elder, *Dutch and English Ships Running in toward a Fleet at Anchor*, mid to late 17th century, pen and brown ink and gray wash over graphite, gift of Mrs. Cornelius Vanderbilt, Yale University Art Gallery.

island of Vlieland on June 9, 1645.[23] The *Brederode* led a fleet of warships tasked with safeguarding more than 300 merchant vessels from privateers and political enemies of the Dutch on a dangerous journey to Scandinavia.[24] In the painting, the *Brederode* towers over the sea, which seems too shallow to contain it, and dwarfs the passersby admiring it from the shore. By emphasizing the ship's relative scale, Van de Velde affirms the might of the Dutch navy, which sustained the Republic's maritime trade and revolutionary political project.[25] At the same time, he takes part in the aggrandizement and justification of an overseas empire built upon the exploitation of lands and peoples.[26] Although *Brederode off Vlieland* features the Dutch coastline, the ship's very departure anticipates its arrival at a distant, foreign shore. In the course of travel, the fleet transforms from a symbol of exalted power at home to one of menace and domination abroad.

Van de Velde's *Dutch and English Ships Running in toward a Fleet at Anchor* preserves the traces of his working process for documenting major historical events (Fig. 2-4). The drawing shows the beginning of a naval confrontation between the Dutch and the English. In the 17th century, the two nations were involved in a series of conflicts known as the Anglo-Dutch Wars, which were provoked by a struggle over trade and foreign colonies.[27] The image is composed of two sheets, which is common in Van de Velde's works on paper.[28] On the right-hand side, Van de Velde focuses on the distant coastline and the specific position of the ships. The left-hand side recalls Van Mander's famous advice about successful landscape painting: "Above all, it shall befit our foreground always to be forceful, in order to make everything else recede."[29] Designed to grab the viewers' attention, the left sheet prominently displays a ship adjusting its sails for battle. Unlike navigation, which is focused on reaching land, naval warfare centers on the enemy and the protection of the coast.

Once a war was won, the Dutch used small objects to commemorate their outsized role on the international stage. Pieter van Abeele's (1608–1684) *Medal Representing the Treaty of Breda and the Raid on the Medway* (1667) exemplifies the inverse relationship between the size of an artwork and the power of its political message (Fig. 2-5). A "monument that moved," Van Abeele's medal commemorated the humiliating defeat of the English in June 1667, when the Dutch navy under the command of Cornelis de Witt (1623–1672) destroyed the British fleet in its home waters, towing away the flagship named after the king.[30] The raid compelled the signing of the Treaty of Breda in July of that year. When Van Abeele's small monument

Figure 2-5. Pieter van Abeele, *Medal of the Treaty of Breda and the Raid on the Medway*, 1667, silver, The Maida and George Abrams Collection, Museum of Fine Arts, Boston.

reached the hands of King Charles II of England, the British monarch was incensed. He viewed it as "ungrateful Insolence" against his person and his country.[31] What contrast, indeed, between the physical scale of the medal and the extent of the king's wrath.

Dutch artists understood the challenge of representing vast, politically charged spaces in infinitely reduced form—whether in landscape views, maps, or commemorative objects—as a problem of relative scale. The use of descriptive detail, as in the works of Bol and Van de Velde, was one approach to negotiating that problem. A second approach, as we have seen with Waghenaer's coastal profile, was the schematic diagram. Van Abeele's medal exemplifies a third pictorial strategy: personification.[32] In 17th-century Dutch art, personifications of concepts or places in embodied form often coexisted with naturalistic representations of landscape. The reverse side of Van Abeele's medal shows a woman with an olive branch and a cornucopia who embodies peace, whereas the obverse features a seascape documenting the Dutch naval victory. Because it is impossible to see both sides of the medal at once, by flipping the small object back and forth, the viewer is meant to engage in a meditative process that highlights the difference between the contemplation of the visible world and the allegorical one. Only then can the larger message of the medal be perceived: war and peace, victory and defeat are literally two sides of the same coin.

Naturalistic representation and personification also coexisted in works on paper. Constantijn Huygens's (1596–1687) poem "The Sea Street" (*De Zee-straet*) celebrated the road from The Hague to the small town of Scheveningen, which connected the capital to the sea.[33] The accompanying illustration by Romeyn de Hooghe (1645–1708) after a design by Jan de Bisschop (1628–1671) serves as the "gateway" to the book (Fig. 2-6).[34] Prominently positioned in the foreground, the triumphal arch—a symbol of power irrevocably tied to conquest—is adorned with the figures of Neptune, god of the sea, and the female personification of The Hague.[35] Originating in the triumphal arch and cutting a perfect straight line through the wild dunes, the Sea Street recedes into the distance, where one can discern the town, as well as the sea and ships. Such imposition of geometry onto the natural environment announces humankind's control of nature. The Sea Street was hardly the first, let alone the most dramatic, Dutch modification of their land. For centuries, the Dutch had been carrying out massive projects of land reclamation, which altered the shape of the country.[36] The artists, in their turn, controlled landscape by inscribing it onto small surfaces or containing it in human figures. Artistic and practical control of nature intersected at sea, where pilot guides allowed navigators to chart a safe course, taming the unruly waves.

David Vinckeboons's (1576–about 1632) frontispiece for Blaeu's *The Light of Navigation* brings together the various approaches to "thinking small" in relation to land and sea (Fig. 2-7).[37] The seafarers and scholars,

Figure 2-6. Romeyn de Hooghe, after the design by Jan de Bisschop, illustration, 1667. From Constantijn Huygens, *De zee-straet van's Graven-hage op Scheveningh* ('s-Gravenhage: Johannes Tongerloo, 1667), engraving, Museum of Fine Arts, Boston.

representatives of the theory and practice that go into the making of a pilot guide, examine maps and navigational instruments, collaborating to improve the art of navigation.[38] Vinckboons unites different visual approaches to the challenge of depicting large spaces on small surfaces by representing the sea in three different ways simultaneously: on the maps, in the stormy seascape, and in the figures of Neptune and Aeolus, divine keeper of the winds. The detailed engraving technique emphasizes the labor of navigation, both as a scientific endeavor (represented in the foreground) and as a practical challenge (with ships and their captains fighting against a storm in the background). Prompted to examine the densely packed scene, viewers are expected to invest time in decoding its meaning, an experience that alters their perception of time and space. The maps and the seascape are images within images, which push the viewers to consider the difference between looking at a representation and seeing reality, between an imagined experience of space and an actual journey. The introductory poem accompanying the frontispiece declares that reading and examining images is a necessary condition for successful sea travel, whether lived or imaginary: "Read and see, from page to page [...] You shall sail without hesitation through mist and gloom because [...] the light of seafaring is here set ablaze for you."[39]

Seventeenth-century Dutch artists sought to capture the experience of a large space on a small surface. When Van Mander wrote that Dutch landscape

Figure 2-7. David Vinckeboons, frontispiece from Willem Jansz Blaeu, *The Light of Navigation* (Amsterdam: William Iohnson, 1622), Beinecke Rare Book and Manuscript Library, Yale University.

artists should aspire to create little worlds with their works, he could scarcely have imagined the extent to which that idea would drive depictions of space across the rest of the 17th century. The challenge of representing experience confronted by landscape artists and cartographers was also a problem faced by natural historians, especially those who sought to create images that revealed what it was to see with magnification. If artists like Bol or Van de Velde endeavored to condense square miles to square inches, naturalists faced the opposite challenge.

Notes

1 *"[…] d'où l'on voit commodément toute la Ville & le pays, qui paroit vne vafte prairie arrofée d'vne infinité de canaux […] La Ville eft iuftement commele plan, qui en eft fait, à la referue qu'on y a fait dépuis peu vne place qui n'y eft pas."* Balthasar de Monconys, *Journal des voyages de monsieur de Monconys… second partie* (Lyon, France: chez Horace Boissat & George Remeus, 1666), 132.

2 Karel van Mander, *The Lives of the Illustrious Netherlandish and German Painters*, ed. and trans. Hessel Miedema (Doornspijk, the Netherlands: Davaco, 1994), 1:301; Frederik J. Duparc, *Golden: Dutch and Flemish Masterworks from the Rose-Marie and Eijk van Otterloo Collection* (New Haven, CT: Yale University Press, 2011), 88. For more on the exodus of artists fleeing the violence of the Dutch Revolt, see Filip Vermeylen, "Greener pastures? Capturing artists' migrations during the Dutch Revolt," *Nederlands Kunsthistorisch Jaarboek* 63 (2013): 40–57.

3 Stefaan Hautekeete, "New Insights into the Working Methods of Hans Bol," *Master Drawings* 50, no. 3 (2012): 345.

4 Ger Luijten, Ariane van Suchtelen, Reinier Baarsen, Walter Kloek, and Marijn Schapelhouman, *Dawn of the Golden Age: Northern Netherlandish art, 1580–1620* (Amsterdam: Rijksmuseum, 1993), 519; Duparc, *Golden*, 89.

5 Duparc, *Golden*, 89.

6 Walter S. Melion, *Karel van Mander and His Foundation of the Noble, Free Art of Painting*, Brill's Studies on Art, Art History, and Intellectual History 62 (Leiden, the Netherlands: Brill, 2023), 300.

7 On panoramas, see Katie Trumpener and Tim Barringer, *On the Viewing Platform: the Panorama between Canvas and Screen* (New Haven, CT: Yale University Press, 2020), passim.

8 For more on the power of landscape over the viewers and their thoughts, see Karl A. E. Enenkel and Walter S. Melion, *Landscape and the Visual Hermeneutics of Place, 1500–1700*, Intersections 75 (Leiden, the Netherlands: Brill, 2021), passim.

9 On *otium* and *negotium* as temporal structures, see Leonid Mikhailovich Batkin, *Italian Humanists: Life Style and Manner of Thought* (Moscow: Nauka, 1978), 24–80. On temporality in Dutch art, see Celeste Brusati, "Perspectives in Flux: Viewing Dutch Pictures in Real Time," in "The Erotics of Looking: Materiality, Solicitation and Netherlandish Visual Culture," ed. Angela Vanhaelen and Bronwen Wilson, special issue, *Art History* 35, no. 5 (November 2012): 909–33.

10 Alison MacNeil Kettering, *The Dutch Arcadia: Pastoral Art and Its Audience in the Golden Age* (Montclair, NJ: Allanheld & Schram, 1983), passim; Allan R. Ruff, "The Dutch Republic and the Golden Age of Landscape," in *Arcadian Visions: Pastoral Influences on Poetry, Painting and the Design of Landscape* (Oxford, UK: Windgather Press, 2015), 53–69.

11 Jacques Le Goff, "Temps de l'Église et temps du marchand," *Annales* 15, no. 3 (May–June 1960): 417–33.

12 Jan de Vries, *Barges and Capitalism: Passenger Transportation in the Dutch Economy, 1632–1839* (Utrecht, the Netherlands: HES Publishers, 1981), 70–76.

13 de Vries, *Barges and Capitalism*, 24.

14 Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, trans. Siân Reynolds (Berkeley, CA: University of California Press, 1995), passim; de Vries, *Barges and Capitalism*, 70.

15 Svetlana Alpers, *The Art of Describing: Dutch Art in the Seventeenth Century* (Chicago: University of Chicago Press, 1983), 119–68; Duparc, *Golden*, 91; Bernhard Siegert, "The Chorein of the Pirate: On the Origin of the Dutch Seascape," *Grey Room*, no. 57 (Fall 2014): 6–23.

16 Günter Schilder and Marco van Egmond, "Maritime Cartography in the Low Countries during the Renaissance," in *The History of Cartography, Volume Three: Cartography in the European Renaissance*, ed. David Woodward (Chicago: The University of Chicago Press, 2007), 1384–1428; Djoeke van Netten, "Een boek als carrièrevehikel: De zeemansgidsen van Blaeu," *De Zeventiende Eeuw* 27 (2011): 216–18; Benjamin Schmidt, "On the Impulse of Mapping, or How a Flat Earth Theory of Dutch Maps Distorts the Thickness and Pictorial Proclivities of Early Modern Dutch Cartography (and Misses Its Picturing Impulse)," in *The Erotics of Looking*, 1036–49.

17 Siegert, "The Chorein of the Pirate," 16–19.

18 *"Si noctu appuleris, speculares ignes diutus non incendunt quam a maris accessus medio, ad recessus medium."* Lucas Jansz Waghenaer, *Descriptio orae maritimae Frisiae orientalis et occidentalis* (Leiden, the Netherlands, about 1592), 21v.

19 Friso Lammertse, "'Embedded Journalist' of Naval Battles: Willem van de Velde I," in *Mapping Spaces: Networks of Knowledge in 17th Century Landscape Painting*, eds. Ulrike Gehring and Peter Weibel (Munich: Hirner, 2014), 186–95; David Cordingly, *The Art of the Van de Veldes: Paintings and Drawings by the Great Dutch Marine Artists and Their English Followers* (London: National Maritime Museum, 1982), 11–13. The First Anglo-Dutch war took place in 1652–1654, the Second in 1665–1667. For more on the Anglo-Dutch wars, see James Rees Jones, *The Anglo-Dutch Wars of the Seventeenth Century* (New York: Longman, 1996), passim; 713–775.

20 Lammertse, "'Embedded Journalist,'" 186–95; Duparc, *Golden*, 298.

21 Lammertse, "'Embedded Journalist,'" 187.

22 Lelia Packer, "Prints as Paintings: Willem van de Velde the Elder (1611–1693) and Dutch pen painting circa 1650–65," in *Prints in Translation 1450–1750: Image, Materiality, Space*, eds. Suzanne Karr Schmidt and Edward H. Wouk (London: Routledge, 2017), 42–58.

23 Van de Velde had personally witnessed the departure of the fleet and depicted it soon after. Duparc, *Golden*, 300.

24 Duparc, *Golden*, 300; Quentin Buvelot, *Made in Holland: Highlights from the Collection of Eijk and Rose-Marie de Mol van Otterloo* (Zwolle, the Netherlands: Waanders Publishers, 2011), 43–44.

25 Packer, "Prints as Paintings," 45; Siegert, "The Chorein of the Pirate," 6–23; Pieter C. Emmer, *The Dutch Overseas Empire, 1600–1800* (Cambridge, UK: Cambridge University Press, 2020), passim; J. R. Bruijn, *The Dutch Navy of the Seventeenth and Eighteenth Centuries* (Columbia, SC: University of South Carolina Press, 1993), passim; George S. Keyes, *Mirror of Empire: Dutch Marine Art of the Seventeenth Century* (New York: Cambridge University Press, 1990), passim.

26 For more, see Johannes Postma, *The Dutch in the Atlantic Slave Trade, 1600–1815* (New York: Cambridge University Press, 1990), passim.

27 Jones, *The Anglo-Dutch Wars*, passim.

28 Based on a survey of M. S. Robinson, compiler, *Van de Velde Drawings: A Catalogue of Drawings in the National Maritime Museum Made by the Elder and the Younger Willem Van de Velde* (London: Cambridge University Press, 1958), passim.

29 *"Alvooren onsen voor-grondt sal betamen // Altijts hardt te zijn, om d'ander doen vlieden […]"* Melion, *Karel van Mander*, 295.

30 See Marisa Anne Bass, *The Monument's End: Public Art and the Modern Republic* (Princeton, NJ: Princeton University Press, 2024), chapter 4. The flagship was called the Royal Charles.

31 David Onnekink, "Symbolic Communication in Early Modern Diplomacy: Naval Incidents and the Third Anglo-Dutch War (1667–1672)," *The English Historical Review* 135, no. 573 (April 2020): 342–43.

32 For more on personification in early modern art and thought, see Walter S. Melion and Bart Ramakers, *Personification: Embodying Meaning and Emotion*, Intersections 41 (Leiden, the Netherlands: Brill, 2016), passim.

[33] Constantijn Huygens, *Zee-straet*, ed. L. Strengholt (Zutphen, the Netherlands: W.J. Thieme & Cie, 1981), lines 185–90; Henk van Nierop, *Life of Romeyn de Hooghe 1645–1708: Prints, Pamphlets, and Politics in the Dutch Golden Age* (Amsterdam: Amsterdam University Press, 2018), 62.

[34] John Landwehr, *Romeyn de Hooghe (1645–1708) as Book Illustrator: a Bibliography* (New York, A. Schram, 1970), 11; van Nierop, *Life of Romeyn de Hooghe*, 62; Gitta Bertram, "Considerations on the History and the Analysis of Illustrated Title Pages," in *Gateways to the Book: Frontispieces and Title Pages in Early Modern Europe*, eds. Gitta Bertram, Nils Büttner, and Claus Zittel (Boston: Brill, 2021), 64–67.

[35] For more on the history of personifications of land and water in Dutch art, see Marisa Anne Bass, *Jan Gossart and the Invention of Netherlandish Antiquity* (Princeton, NJ: Princeton University Press, 2016), 45–73. On the triumphal arches, see Peter Howell, *The Triumphal Arch* (London: Unicorn, 2021), passim.

[36] The inverse of land reclamation, flooding, was both a military strategy and a natural disaster. Salvatore Ciriacono, "Land Reclamation: Dutch Windmills, Private Enterprises, and State Intervention," in *Review (Fernand Braudel Center)* 18, no. 2 (Spring 1995): 281–304; Alette Fleischer, "The Garden behind the Dyke: Land Reclamation and Dutch Culture in the 17th Century," in *Icon* 11 (2005): 16–32; Wolfgang Pircher, "The Landscape of the Engineer: An Historical Account of Land Reclamation," in *Mapping Spaces: Networks of Knowledge in 17th Century Landscape Painting*, eds. Ulrike Gehring and Peter Weibel (Munich: Hirner, 2014), 407–12; Lytle Shaw, *New Grounds for Dutch Landscape* (Stockholm: OEI editor, 2021), 123–78; Robert Tiegs, "Hidden Beneath the Waves: Commemorating and Forgetting the Military Inundations during the Siege of Leiden," *Canadian Journal of Netherlandic Studies* 35, no. 2 (2014): 5.

[37] On the frontispiece and Blaeu's pilot guide, see Hendriekje Bosma, "Het licht der zeevaart: De symbolische betekenis van licht in drie 17e-eeuwse leerboeken over zeevaartkunde," *Caert-Thresoor* 3.4 (1984): 58–62; C. P. Burger, "Oude Hollandsche zeevaart-uitgaven. De oudste uitgaven van het 'Licht der Zeevaert,'" in *Tijdschrift voor boeken bibliotheekwezen* 6 (1908): 119–37; J. Keuning, *Willem Jansz. Blaeu: A Biography and History of His Work as a Cartographer and Publisher*, ed. Marijke Donkersloot-de Vrij (Amsterdam: Theatrum orbis terrarum Ltd., 1973), passim; Van Netten, "Een boek als carrièrevehikel," 214–31; Margaret Russell, "The Light of Navigation," *Dutch Quarterly Review of Anglo-American Letters* 10 (1980): 244–57.

[38] In the preface, Blaeu recognizes "the aide [sic] … of many expert and skillful Sailors, Masters, and Pilots" in the creation of his pilot guide. Willem Jansz. Blaeu, *The Light of Navigation* (Amsterdam: William Iohnson, 1622), 4. Some editions of *The Light of Navigation* featured a dedication to sailors and scholars, alongside a request to report errors and changes in the coastlines. Van Netten, "Een boek als carrièrevehikel," 219.

[39] *"[…] leest, siet, van bladt tot bladt // … Zeylt sonder schroom door mist en donckerheden, want // In 't duyster wordt u hier des Zeevaerts Licht onsteecken."* Translated by Marisa Bass. For more on the interconnection of light and science in Dutch art, see Rienk Vermij, "The Light of Nature and the Allegorisation of Science on Dutch Frontispieces Around 1700," in "Art and Science in the Early Modern Netherlands," special issue, *Nederlands Kunsthistorisch Jaarboek* 61 (2011): 208–37.

Observing the Minuscule

by Renata Nagy

Jan Swammerdam (1637–1680) demonstrated outstanding hand-eye coordination in his dissection and microscopic examination of insects. Swammerdam's dexterity also extended to his skilled drawings for print. The Dutch naturalist drew for the sake of sharing his findings with a broad audience, beginning with colleagues passionate about the study of the natural world as a pathway to spiritual understanding. In a letter to his friend and patron Melchisedec Thévenot from April 1678, Swammerdam describes the anatomy of the louse in the following way:

> Herewith I offer you the Omnipotent Finger of God in the anatomy of a louse: wherein you will find miracles heaped on miracles and will see the wisdom of God clearly manifested in a minute point [...] Here you will find, in a particle of a line, the complete structure of the most ingenious viscera of the animals of the whole universe implied, as it were, in a summary.[1]

Swammerdam gives enormous significance to his illustration of a very small creature. He proposes that a "minute point" (i.e., the internal structure of a tiny insect such as the louse) reflects the ingenuity of divine creation and implies the structure of nothing less than "the whole universe." In doing so, he prompts Thévenot to think through the interconnectedness of all creatures, regardless of scale.

Issues of scale were central to Swammerdam's enterprise. He often juxtaposed images of his subjects at their actual size with magnified details of their anatomy. For instance, his representation of a mosquito, published in 1685 in his treatise, *General History of Insects* (*Historia Insectorum Generalis*), shows the insect four times, twice to

Figure 3-1. Jan Swammerdam, *General History of Insects (Historia Insectorum Generalis)*, 1685, illustrated book, Smithsonian Libraries, Courtesy of Smithsonian Libraries, Washington, DC.

scale and twice enlarged (Fig. 3-1). A close-up image of a female specimen focuses on the mosquito's forehead, distinguishing its antennae and proboscis. Comparing the tiny dot that the mosquito is with the immense creature it becomes under the microscope helps one imagine the vast world contained within a "particle of a line." Swammerdam's associations of the mosquito's hair with "small scales in fish" also helped readers understand the connection between all creations.[2] As significant parts of the divine design, insects rise in the hierarchy of creation, close to the level of human complexity. Within this intricate system, Swammerdam positions humans at the top, showing them as beings capable of understanding, visualizing, and copying God's work.

Swammerdam's treatment of insects is closely associated with the emergence of microscopes in the mid-17th century—instruments that he himself helped to popularize.[3] However, even before the invention of the microscope, natural historians in the Netherlands were fascinated by the relation between part and whole due to their commitment to the Book of Nature, a belief that studying natural creation led to a greater understanding of God.[4] The religious concept extended beyond the realm of natural history and also found a manifestation within artistic and collecting practices. Artists utilized natural specimen studies as building blocks to create larger ecosystems in still life compositions or to decorate objects of nature, such as shells. Gathering plant specimens in books allowed amateur collectors to connect to the wider realms of the created world. In all these instances, thinking with small things helped to complete, decipher, and explain larger aspects of the natural world.

The Dutch fascination with the microcosmic was, in this sense, not dependent on technology. Swammerdam's contemporary, Jan Goedaert (1617–1668), was a fellow student of the Book of Nature who modeled patience, persistence, and dedication in his observations of insects. In his three-volume treatise published between 1662 and 1669, *Natural Metamorphosis* (*Metamorphosis Naturalis*), Goedaert melds his discussion of a caterpillar's transformations with an account of his own experience:

> I gave this caterpillar many plants to eat, but it refused them all. After it had been fed with nettles for some time, it composed itself for change on October 3. Out of this change came a very fair, peacock-eyed butterfly on December 1. The butterfly lived 40 days without food, and died, for I knew not what to feed it with.[5]

In Goedaert's emphasis on dates and duration, he reveals a fundamental aspect of any serious study of nature: the amount of time that it requires. His publication was the result of more than three decades of thorough research as well as an ardent devotion to uncovering nature's mysteries.[6] Unlike Swammerdam, he refused to use a microscope or to dissect the insects that he studied; instead, he respected their life cycle from birth to death. His attention to depicting the minuscule hairs of the caterpillar with care reveals his reverence for even the smallest details of divine nature (Fig. 3-2). Goedaert's written description animates his images

Figure 3-2. Johannes Goedaert, *Metamorphosis naturalis*, 1662–69, illustrated book with hand-colored etchings, gift of George S. Abrams in memory of Charlotte and Arthur Vershbow, Museum of Fine Arts, Boston.

of the insect's transformation, substantiating that the illustrations in fact display the changing phases of the same life. Goedaert's message lived on after the butterfly itself had perished: persistent observation yields new insights.

Students of insects like Goedaert were not the only ones who knew that fieldwork takes time and patience. The study of botany was even more widespread in the early modern period among both medical professionals and amateur enthusiasts. Herbals were primary sites for the study and practice of botany—the result of diligent collecting on the part of their compilers, aids for identifying plans on the part of their readers, and prompts for future collecting and inquiry.[7] Rembert Dodoens's herbal was one of the most widespread and popular herbals to consult in the late 16th century and beyond, and was translated into many languages. In an English copy from 1578, now preserved in the Beinecke Rare Book & Manuscript Library at Yale University, the user of this herbal pressed a handful of plant specimens between the pages where the illustrations of the very plants were also found. Placing plants in books was a common practice among early modern readers.[8] In the Beinecke copy, an intact sprig of fern is pressed between the pages that also display its illustration (Fig. 3-3).

This kinde of Ferne beareth neither flowers nor ſeede, except we ſhal take for ſeede the blacke ſpottes growing on the backſide of the leaues, the whiche ſome do gather thinking to worke wõders, but to ſay the trueth, it is nothing els but trumperie and ſuperſtition.

Filix mas. Osmunde Royall.

Filix fœmina.
Brake or common Ferne.

The female Ferne alſo, hath neyther flowers nor ſeede, but it hath long, greene, bare ſtemmes, vpon the whiche growe many leaues on euery ſyde, cut in, and toothed rounde about, very like to the leaues of male Ferne, but ſomewhat leſſe. The roote of this Ferne is long and ſmal, blacke without, and creeping along in the grounde. ¶ *The Place.*

Male Ferne groweth almoſt in al rough and bneuen places, in moyſt ſandy groundes, and alongſt the borders of feeldes, ſtanding lowe or in vallies.

The female kinde is founde in woods, and mountaynes.

The Tyme.

The leaues ſpring foorth in Aprill, and wither or fade in September.

The Names.

The firſte kinde of Ferne, is called in Greeke πτερις, ἄρρην: in Latine Filix mas, that is to ſay, The Male Ferne: in Frenche *Fenchiere maſle*: in high Douch Waldtfarn mennle: in neather Douchland Varen manneken, of Matheolus and Ruellius, it is called Osmunde Royall.

The ſeconde kinde is called in Greeke θηλυπτερις, and of ſome νυμφαία πτερις: in Latine Filix fœmina: in Frenche *Fenchiere femelle*: in Engliſhe Female Ferne: in high Almaigne Waldtfarn Weiblin, and of ſome Groſz Farnkraut: in baſe Almaigne Varen wijfken: in Engliſh Brake, Common Ferne and female Ferne.

Figure 3-3. Rembert Dodoens, *A nievve herball, or, Historie of plantes : wherein is contayned the vvhole discourse and perfect description of all sortes of herbes and plantes, their diuers & sundry kindes, their straunge figures, fashions, and shapes [...]* (London: By me Gerard Dewes, dwelling in Pawles Churchyarde at the signe of the Swanne, 1578), Beinecke Rare Book and Manuscript Library, Yale University.

In the text, Dodoens demystifies the fern. While some thought the plant had the power "to worke wonders," Dodoens writes that such a belief was nothing but "trumperie and superstition."[9] Whether the user of the book agreed with this sentiment or not remains unclear. However, the small leaf of the plant specimen created a tactile impression of the larger natural world from which it was plucked, and registered the user's personal story as well, both of which could be experienced repeatedly through touch.[10]

Insect specimens were more commonly collected in boxes than books.[11] The careful process of pinning down insects in boxes inspired prints that simulated such physical collections on the page. Nicolaes Visscher's engraving series of *Diverse Flying Insects* (1630) was a ready-made collection of insect specimens from which numerous artists copied and sought inspiration. Visscher himself copied his illustrations from the works of Joris Hoefnagel (1542–1600), a Netherlandish polymath and pioneer in the representation of insects from the previous century.[12] Visscher decontextualized and scattered his subjects across the blank page, inviting viewers to contemplate their arrangement or to focus on a single specimen.[13] Artists in particular extracted and repurposed individual specimens from these sheets for use in their own compositions, as we can see with Jan Bellekin's nautilus cup (see Fig. I-1). Amateur collectors also occasionally cut out specimen illustrations of this kind and pasted them into scrapbooks to create imagined collections of their own.[14] An unidentified user in the mid-17th century cut out a hairy moth, a crawling beetle, and a spider, among other specimens, from a copy of Visscher's print, and pasted them into a scrapbook (Fig. 3-4), now located in the Bibliotheca Thysiana in Leiden. The process of cutting and pasting allowed for both producing highly individualized collections and simulating the created world.

Artists assembled coherent still-life compositions out of component parts. In his painting *Animals*

Figure 3-4. Anonymous, *Thysiana scrapbook*, mid 17th century, pasted engravings on paper, Bibliotheca Thysiana, Leiden, the Netherlands.

Figure 3-5. Melchior d'Hondecoeter, *Animals and Plants of the Forest*, about 1670–80, oil on canvas, bequest of Dr. Herbert and Monika Schaefer, Yale University Art Gallery.

and Plants of the Forest (about 1670–80), Melchior d'Hondecoeter gathered a variety of insects, amphibians, and birds in an imaginary forest floor scene (Fig. 3-5).[15] As the specimens are all native to the Netherlands, d'Hondecoeter may have studied some of them in life. The bumblebee (genus *Bombus*) camouflaging on the thistle plant at the bottom front would have been easy to observe in most gardens or fields.[16] The artist also likely consulted a variety of visual sources, and perhaps a few of his own sketches of birds.[17] D'Hondecoeter's composition allows viewers to isolate the specimens from their setting and study them individually. For example, by representing three red admiral butterflies (*Vanessa atalanta*), each in a different position, the artist invites the viewer to fully imagine the insect in the round and flitting from one perch to another (Fig. 3-6). So too the varied poses of the birds suggest movement and dimensionality. The Blue Tit bird (*Cyanistes caeruleus* ([*Paridae*]) on the top right sitting on a branch faces inward, showing the viewer only its yellow blue back, while the Common Nightingale below it (*Luscinia megarhynchos* [*Muscicapidae*]) is depicted in profile and the Eurasian woodcock bird (*Scolopax rusticola* [*Scolopacidae*]) on the ground is displayed from the front as it is searching for food.[18] Unlike Visscher's insect specimens isolated on the page, d'Hondecoeter embeds his specimens in an environment in which they can participate, thrive, and interact. Within this constructed ecosystem, the painting asks the viewer to reflect on each individual creature as part of a larger whole.

Artists who grouped botanical specimens in still life paintings also generated imaginary bouquets. A small painting by Balthasar van der Ast (1593 or 1594–1657) exemplifies this composite approach. Van der Ast created a hyperrealistic albeit fantastical collection of flowers in this tiny painting on copper, so small one could cradle it with one hand (Fig. 3-7). Because of their perceived preciousness, small size, and durability, copper paintings were desired objects to give within the artistic and intellectual circles of 17th-century Northern Europe.[19] Subjects of the natural world on such a miniature scale, like this exquisite van der Ast flower painting, would have also inspired intimate introspection and tactility from their respective owners.[20] One can picture the painting's owner attempting to touch the smooth shell at the front, stop the water droplets falling down from the leaves of the pink rose, or reach out to the fading vista of the background, only to be halted by the delicate brushstrokes of the artist.

Figure 3-6. Melchior d'Hondecoeter, *Animals and Plants of the Forest* (detail), about 1670–80, oil on canvas, bequest of Dr. Herbert and Monika Schaefer, Yale University Art Gallery.

Figure 3-7. Balthasar van der Ast, *Bouquet of Flowers on a Ledge*, 1624, oil on copper, gift of Rose-Marie and Eijk van Otterloo in support of the Center for Netherlandish Art, Museum of Fine Arts, Boston.

Van der Ast's lifelike figures are not the only source of the painting's ruse. The artist could not paint the bouquet after life, for the tulips, roses, and irises bloom at various times of the year. Instead, van der Ast likely produced the painting after individual sketches of flowers he had made over time.[21] He used the individual specimens to fill up the entire composition in a crowded bouquet, where the flowers vie for the viewer's attention.[22] Van der Ast invites us to select a flower, mentally take it out of the vase, observe and examine it. Like items of a natural historical catalog, the plant specimens can be individually identified. Gathered together, nonetheless, they were displayed like a "museum exhibit," showing both the costly price of the flowers and the painting.[23]

The master shell artist Dirck van Rijswijck (1596–1680) explored the relation of part to whole through even more exacting means. In his compositions, tiny pieces of mother-of-pearl are inlaid in wood or marble and arrayed like mosaics to form luminescent compositions. In one of the many inlays he created, a still life of flowers and insect specimens is offset against a dark ebony ground (Fig. 3-8).[24] The mother-of-pearl pieces encapsulate the distance to the South Pacific, where the shell was harvested,[25] and evokes that vast space in a small-scale composition that one may touch with the tip of one's finger and turn in one's hand. Rijswijck imitated the most delicate details of nature's beauty in the gossamer wings of a dragonfly or the fragile petals

Figure 3-8. Dirck van Rijswijck, *Floral Still Life*, 17th century, oak panel, ebony, rosewood (Dalbergia latifolia or East Indian Rosewood), mother-of-pearl (Pinctada Maxima), African blackwood (Dalbergia Melanoxylon), Rose-Marie and Eijk van Otterloo Collection.

of a tulip. His manipulation of a natural material bespeaks both his craftsmanship, as well as the time and patience needed to rework the shell. A product of nature, the mother-of-pearl that Rijswijck used provided a durable material to commemorate the more fragile and transient creations of nature, such as flowers and insects.

Shells were also powerful objects in the sense that their exquisite design was believed to contain both the divine craftsmanship and the entire creation within.[26] The swirling shape and the uninterrupted lines of shells evoked the grander design of the whole universe and its mysteries. As much as Swammerdam found "the whole universe" in the anatomies of a single specimen, shells, both as natural specimens and as reworked works of art, also encompassed the macrocosm. When handlers of Bellekin's *Nautilus Cup* turned the object in their hands,[27] they were not only handling a small piece of nature's creation but also holding an embodiment of the entire creation in the palm of their hands—a reminder that thinking with small things could prompt thoughts of immensity.

Notes

[1] *"Ik presenteer ued alhier den almaghtigen vinger gods, in de Anatomie van een luijs; waar in gy wonderen op wonderen, op een gestapelt sult vinden, en de wysheid Gods in een kleen puncte klaarlyk sien ten toon gestelt […] Alhier sult gy in een gedeelte van een linie de gansche structuur van de alderkunstighste ingewanden der dieren van het geheele univers te samen; als in een kort begrip opgeslooten vinden."* Translation from G. A. Lindeboom, *The Letters of Jan Swammerdam to Melchisedec Thévenot* (Amsterdam: Swets & Zeitlinger, 1975), 104–5.

[2] Jan Swammerdam, *Historia Insectorum generalis* (Lugd. Batavorum: apud Jordanum Luchtmans, 1685), 100. Translation by the author of this essay. *"Quantum ad comites aculeo particulas, in fronte prominentes, spectat, eas triplici articulatione divisas observamus, pilosas circa extrema, et hinc inde suscis quibusdam pilis, quae ad instar squamularum in piscibus apparent, obsitas."*

[3] Eric Jorink, "Beyond the Lines of Apelles: Johannes Swammerdam, Dutch Scientific Culture and the Representation of Insect Anatomy," in *Art and Science in the Early Modern Netherlands* (Netherlands Yearbook for History of Art volume 61, 2011): 143–83.

[4] Eric Jorink, "Insects, Philosophy, and the Microscope," in *Worlds of Natural History*, ed. H. A. Curry, (Cambridge, UK: Cambridge University Press, 2018), 133–36.

[5] The translation is from the English edition of Martin Lister, *Johannes Godartius of Insects, Done into English, and Methodized, with Additional Notes* (York, printed by John White, 1682), 7. See the original text by Goedaert: *"Na datik deze Rupze veel en verscheidene kruiden hadde voorgezet, wilde zy nergens van prouven, of aan komen; ten laatsten steldd' ik haar Netelen voor, alzoo my dagt, dat zy wat netelagtig om haar herte was, en der netelagtig uit zag: 't welk doende, zag ik met verwonderinge aan; hoe verblijd zy was , hoe zy haren kop , aan het netel-kruid streek, en wreef ; als of zy het kruid willekom hiet, en hoe graag, en smaaklijk zy der van at. Als ik haar nueen tijd lank met Netelen gevoed hadde, zoo ging z'haar, op den 3. van Wijn-maand ter veranderinge stellen , (in die gedaante , in welke gy haar op het midden van de Plaate zien kont) in een omgekeerd wijn-glas, tegen 't midden aan, neerwaarts hangende….Op den 20. van Slagt-maand quam der een gevleugeld diertjen uit te voor schijn, gelijk die Witjes, diemen Schoen-lappers of Lang-beenen by ons noemt, het welke Pauw-koleurig, en schoon om aan-zien was. Dit leefde 40. dagen zonder voedzel, en ten laatsten stierf het, alzoo zijn gewoonlijk voedzel my onbekent was,"* in Johannes Goedaert, *Metamorphosis Naturalis, ofte Historische Beschryvinghe,* (Middelburg, the Netherlands, 1667), 163–65.

[6] Saskia Klerk, "Natural History in the Physician's Study: Jan Swammerdam (1637–1680), Steven Blankaart (1650–1705) and the 'Paperwork' of Observing Insects," *BJHS* 53(4) (December 2020): 516–17.

[7] Brian Ogilvie, *A Science of Describing: Natural History in Renaissance Europe* (Chicago: University of Chicago Press, 2008), 44–45.

[8] Examples include, but are not limited to, a pressed *stellaria* plant within the pages of a 1585 edition of Pietro Andrea Mattioli's *Commentary on Dioscorides*, located in the Biblioteca Nazionale Marciana in Venice. The pressed specimen is also placed next to its illustration in the book. See April Oettinger, "Ekphrasis and the Romance of Botany in the Age of Pietro Andrea Mattioli," in *Ekphrastic Image-Making in Early Modern Europe, 1500–1700*, eds. Arthur J. DiFuria and Walter S. Melion (Boston: Brill, 2022), 742.

[9] Rembert Dodoens, *A nievve herball, or, Historie of plantes* […] (London: By Mr. Gerard Dewes, dwelling in Pawles Churchyarde at the signe of the Swanne, 1578), 401.

[10] Oettinger, "Ekphrasis and the Romance of Botany," 761.

[11] Janice Neri, *The Insect and the Image: Visualizing Nature in Early Modern Europe, 1500–1700* (Minneapolis: University of Minnesota Press, 2011), 27–73.

[12] For more on Hoefnagel and his works, see Marisa Bass, *Insect Artifice: Nature and Art in the Dutch Revolt* (Princeton, NJ: Princeton University Press, 2019).

[13] Neri, *The Insect and the Image*, x–xxvii. See her introductory chapter on specimen logic, i–xxvii.

[14] Inventory no. THYSIA 1568.

[15] For more on forest floor still life paintings, see Karin Leonard, "Pictura's fertile field: Otto Marseus van Schrieck and the genre of sottobosco painting," *Simiolus Netherlands Quarterly for the History of Art*, Vol. 34, No. 2 (2009/2010): 95–118.

[16] See Elizabeth Levie, "Spooky or Science? *Animals and Plants of the Forest* and Early Modern Collecting Culture" (Seminar paper, Yale University, December 2022), 10. Specimen identification is thanks to Lawrence Gall, entomologist and collections manager of the Peabody Museum of Natural History.

[17] For more on the kinds of visual resources that artists resorted to at the time, refer to José Ramón Marcaida, "Rubens and the Bird of Paradise: Painting Natural Knowledge in the Early Seventeenth-Century," *Renaissance Studies*, vol. 28, no 1. (February 2014): 112–27. Hondecoeter specialized in the painting of birds and poultry. For an example of a preparatory sketch, refer to object number RP-T-1960-82(V) in the Rijskmuseum, Amsterdam.

[18] See Levie, "Spooky or Science?" 9. Bird specimen identifications are thanks to Richard Prum, the William Robertson Coe Professor of Ornithology of Ecology and Evolutionary Biology at Yale University, and Head Curator of Ornithology at the Peabody Museum of Natural History.

[19] For more on the economics of copper and its aesthetic qualities as support in paintings, see the exhibition catalog of the Phoenix Art Museum: Michael Komanecky, *Copper as Canvas: Two Centuries of Masterpiece Paintings on Copper, 1575–1775* (New York: Oxford University Press, 1999). Copper paintings were widely regarded as sophisticated because of the refined brushstrokes and meticulous handling it required from artists. Because of its stability, copper support was popular among patrons in the 17th century for miniature cabinet pictures with details and portraits. In addition to being popular as gifts, copper paintings were also often intended to be exported to the Americas and Asia. For the gift giving and friendship culture of early modern Northern Europe in the 17th century, refer to Marisa Bass, "*Florilegium*: The Origins of the Flower Still Life in the Early Modern Netherlands," in *Tributes to David Freedberg: Image and Insight*, ed. Claudia Swan (London/Turnhout: Harvey Miller Publishers, 2019), 11–27.

[20] Bass, "Florilegium," 18, 21–24. Netherlandish artist, Joris Hoefnagel (1542–1600) created and gifted small flower pieces on parchment that he often attached to wood support, which were meant to be handled and touched by their recipients. The paintings of Ambrosius Bosschaert the Elder (1573–1621), who was the teacher of Balthasar van der Ast translated the intimacy of earlier Netherlandish flower pieces into still life paintings. Bosschaert was also active in the intellectual circles of Middelburg, the same town van der Ast was from.

[21] Ingvar Bergström, *Dutch Still Life Painting in the Seventeenth Century* (London: Faber and Faber, 1956), 50.

[22] Harry Berger, *Caterpillage: Reflections on Seventeenth Century Dutch Still Life Painting* (New York: Fordham University Press, 2011), 47–48.

[23] Paul Taylor, *Dutch Flower Painting*, 1600–1720 (New Haven, CT: Yale University Press, 1995), 16.

[24] Other examples include, but are not limited to, another ebony piece at the Staatliche Kunstsammlungen, Grünes Gewölbe, Dresden (inv. No. III 175). See Femke Diercks, "Inspired by Asia: Responses in the Dutch Decorative Arts," in *Asia in Amsterdam: The Culture of Luxury in the Golden Age*, eds. Karina H. Corrigan, Jan van Campen, Femke Diercks, and Janet C. Blyberg (Salem, MA: Peabody Essex Museum, 2015), 301. A marble inlay example is located at the Metropolitan Museum of Art, "Online Catalog Entry of Floral Still Life, Dirck van Rijswijck (1662), https://www.metmuseum.org/art/collection/search/207551.

[25] Daniëlle Kisluk-Grosheide, "Dirck van Rijswijck (1596–1679), a Master of Mother-of-Pearl," *Oud Holland* 111, no. 2 (1997): 77–94.

[26] Emma Spary, "Scientific Symmetries," *History of Science* vol. 42 (2004): 1–46.

[27] On the handling of art objects in collections that incorporated natural materials, such as shells, see Martin Kemp, "Wrought by No Artist's Hand: The Natural, the Artificial, the Exotic, and the Scientific in Some Artifacts from the Renaissance," in *Reframing the Renaissance: Visual Culture in Europe and Latin America 1450–1650*, ed. Claire Farago (London: Yale University Press, 1995), 177–96.