Thinking Small: Dutch Art to Scale

©️ 2024 Museum of Fine Arts, Boston. All Rights Reserved.

The exhibition was made possible by the Jane and Gerald Katcher Fund for Education, Yale University Art Gallery, and the Bob and Happy Doran Fund for the Center for Netherlandish Art, Museum of Fine Arts, Boston. The Founders for the Center for Netherlandish Art are Rose-Marie and Eijk van Otterloo, and Susan and Matthew Weatherbie.
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>About This Publication</td>
<td></td>
</tr>
<tr>
<td>Exhibition</td>
<td></td>
</tr>
<tr>
<td>Acknowledgments</td>
<td></td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Adam Chen</td>
<td></td>
</tr>
<tr>
<td>Sensing the Small</td>
<td>7</td>
</tr>
<tr>
<td>Joyce Yusi Zhou</td>
<td></td>
</tr>
<tr>
<td>Miniaturizing the Distant</td>
<td>15</td>
</tr>
<tr>
<td>Ekaterina Koposova</td>
<td></td>
</tr>
<tr>
<td>Observing the Minuscule</td>
<td>25</td>
</tr>
<tr>
<td>Renata Nagy</td>
<td></td>
</tr>
</tbody>
</table>
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.

For support with interpretation, they also warmly thank Jordan Cromwell, Tiffany Sprague, and Stacey Wujcik; for communications and publicity, Roland Coffey, Alice Matthews, and Molleen Theodore; for exhibition design, Keith Crippen and Andrew Daubar; for graphic design, Chris Chew and Nick Pioggia; and for all manner of logistics, Amy Dowe, Melinda Monzione, and Mallory McCoy. Finally, they thank Cindy Trickel, who edited and managed the production of this publication; Jill Bendonis and Ashley Bleimes, who oversaw its design; and Chris Atkins, who made everything possible.
The philosopher René Descartes (1596–1650) described Amsterdam in 1631 as a place where he could pursue his “daydreams” undisturbed. 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
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. 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. 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.” 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,
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. Bellekin sourced the images of the gambling scene and doctor from a series of prints designed by the engraver Pieter Jansz. Quast (1606–1647). 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. 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. 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 incommode from sun or frost?” 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.
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. 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.” 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.” 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].

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.

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.”

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,” 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.

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.


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).


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 (Wolfenbüttel, Germany: Edition Minerva, 2001), 396.

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. 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).

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 another of a marvel.
another of a bat. A scroll occupies the top of the oval, which is inscribed with a Dutch rendition of Revelation 14:13—“Blessed are those who die in the Lord because they rest from their labor.” 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
Caribbean landscape alongside birds of paradise, enslaved African laborers, and a fantastic feathered parasol. 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). 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 Hulde 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. 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). 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. 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.

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). Within Gijsbrechts’s 1663 Trompe l’œil, 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.

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. A rendition of this etching appears at the center of Gijsbrechts’s Trompe l’œil 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.
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. 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.

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.
Hudde's grandfather, Hendrick Arentsz Hudde (1541–1596), and great-grandfather, Hendrick Arentsz Hudde (1541–1596), and great-grandfather of Fine Arts, 2021), 142–43.

Cambridge University Press, 2019), 133–68.


Notes
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
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. 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. 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. In Bol’s delicate handling, close looking becomes the condition for seeing into the distance.

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). 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. 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.” 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. For skippers, time was money in a very literal sense, because they were not only paid for their trips but also fined for lateness. 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.

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. 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 zeevaert* (1608).16

Functioning as visual anchors in these pilot guides, coastal profiles like the one in Wagenaer’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 Wagenaer’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 Wagenaer, 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.
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. Upon returning to his studio, he assembled large compositions on the basis of his sketches, creating historically accurate narratives from disparate scenes. In some of his compositions, Van de Velde documented his extensive and dangerous fieldwork by including his own vessel among the fighting ships.

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). 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.
island of Vlieland on June 9, 1645. 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. 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. At the same time, he takes part in the aggrandizement and justification of an overseas empire built upon the exploitation of lands and peoples. 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. The image is composed of two sheets, which is common in Van de Velde’s works on paper. 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.” 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. The raid compelled the signing of the Treaty of Breda in July of that year. When Van Abeele’s small monument
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. 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. 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. 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). 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. 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. 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). The seafarers and scholars,
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. 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.”

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


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.


For more, see Johannes Postma, The Dutch in the Atlantic Slave Trade, 1600–1815 (New York: Cambridge University Press, 1990), passim. See Marcel van der Steur, ““Van de Velde had personally witnessed the departure of the fleet and depicted it soon after,” Duparc, Golden, 300.

For more, see Johannes Postma, The Dutch in the Atlantic Slave Trade, 1600–1815 (New York: Cambridge University Press, 1990), passim. See Marcel van der Steur, ““Van de Velde had personally witnessed the departure of the fleet and depicted it soon after,” Duparc, Golden, 300.

For more, see Johannes Postma, The Dutch in the Atlantic Slave Trade, 1600–1815 (New York: Cambridge University Press, 1990), passim. See Marcel van der Steur, ““Van de Velde had personally witnessed the departure of the fleet and depicted it soon after,” Duparc, Golden, 300.

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

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

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

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


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.

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
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.  

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. 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. 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.

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. 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.
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. 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. In the Beinecke copy, an intact sprig of fern is pressed between the pages that also display its illustration (Fig. 3-3).
Figure 3-3. Rembert Dodoens, A nieuwe herball, or, Historie of plantes: wherein is contayned the vwhole discourse and perfect description of all sortes of herbes and plantes, their dyuers & 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 work wonders,” Dodoens writes that such a belief was nothing but “trumperie and superstition.” 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.

Insect specimens were more commonly collected in boxes than books. 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. Visscher decontextualized and scattered his subjects across the blank page, inviting viewers to contemplate their arrangement or to focus on a single specimen. 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. 1–1). Amateur collectors also occasionally cut out specimen illustrations of this kind and pasted them into scrapbooks to create imagined collections of their own. 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*...
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). 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. The artist also likely consulted a variety of visual sources, and perhaps a few of his own sketches of birds. 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. 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. 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. 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.
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. He used the individual specimens to fill up the entire composition in a crowded bouquet, where the flowers vie for the viewer’s attention. 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.

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). The mother-of-pearl pieces encapsulate the distance to the South Pacific, where the shell was harvested, 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...
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. 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, 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.


6. 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). See the original text by Goedart, “By medicine and skill, I have added a second, because you have already seen, that it is not full of fruits, nor of flowers, but rather of the same kind as the ancient Romans used to sow in the fields.”


10. 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). See the original text by Goedart, “By medicine and skill, I have added a second, because you have already seen, that it is not full of fruits, nor of flowers, but rather of the same kind as the ancient Romans used to sow in the fields.”


16. See Elizabeth Leive, “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.


18. See Leive, “Spooky or Science?” 9. Bird specimen identifications are thanks to Richard Prum, the William Robertson Coe Professor of Ornithology 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 Komaneky, Copper as Canvas: Two Centuries of Masterpiece Paintings on Copper (1755–1775) (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, “Floniegium: 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, “Floniegium,” 18–24. Netherlands artist, Joris Hoefnagel (1542–1600) 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 Netherlands flower pieces into still life paintings. Bosschaert was also active in the intellectual circles of Middelburg, the same town van der Ast was from.


24. Other examples include, but are not limited to, another ebony piece at the Rijksmuseum, Amsterdam.


26. Rembert Dodoens, A niewe herdall, or: Historie of plantes [...] (London: By Mr. Gerard Dewes, dwelling in Pawles Churchyarde at the signe of the Swanne, 1578), 401.


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.