

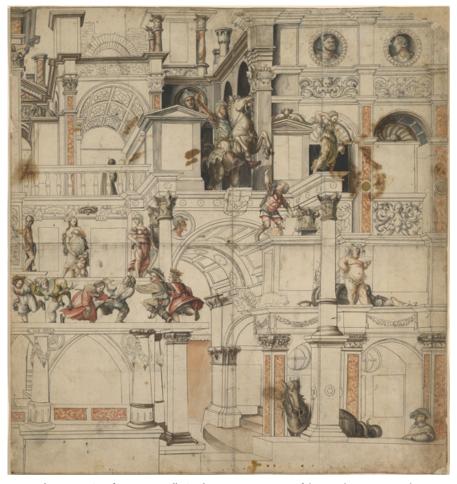
## ONE

# ARCHITECTURE'S FIGURAL TURN

IN A DRAWING MADE BETWEEN 1525 AND 1530, ONE CAN STUDY a record of a now-lost façade painting Hans Holbein the Younger executed for the so-called *Haus zum Tanz* (House of the Dance) in Basel [Fig. 1.1].<sup>1</sup> The stout columns, fictive openings, impossible perspectives, and reeling dancers portrayed in the drawing conjure an architecture replete with spatial illusions and lively figuration. The structural oddities and kinetic qualities of the design also showcase Holbein's contempt for contemporary conventions of proportion and stability in building. For Holbein and other sixteenth-century artists in northern Europe, façade painting and other types of architectural image often defied the norms of the built world. The *Haus zum Tanz* flaunted Holbein's liberty as a painter to adorn façades with preposterous structures and precariously moving bodies, for nothing he portrayed in that arena could threaten the physical fabric of his built canvas. Negating the tectonic logic of built architecture, Holbein asserted that façade painting and other modes of architectural image-making, with their relatively capacious relationships to structure, did

#### Caption for Chapter Opener

Unknown artist after Hans Holbein the Younger, *Image of the Façade Painting on the* Haus zum Tanz (*Tanzgässlein Façade*) [detail], circa 1525–1530, pen and ink with watercolor on four sheets of laid paper mounted on another sheet,  $62.2 \times 58.5$  cm, Basel, Kunstmuseum Basel, Inv. 1955.144.2. In: Kunstmuseum Basel, Sammlung Online, https://sammlungonline.kunstmuseum basel.ch/eMP/eMuseumPlus?service=ExternalInterface&module=collection&objectI d=17088&viewType=detailView. Image in the Public Domain.



1.1 Unknown artist after Hans Holbein the Younger, *Image of the Façade Painting on the* Haus zum Tanz (*Tanzgässlein Façade*), circa 1525–1530, pen and ink with watercolor on four sheets of laid paper mounted on another sheet, 62.2 × 58.5 cm, Basel, Kunstmuseum Basel, Inv. 1955.144.2. In: Kunstmuseum Basel, Sammlung Online, https://sammlungonline.kunstmu seumbasel.ch/eMP/eMuseumPlus?service=ExternalInterface&module=collection&objectId= 17088&viewType=detailView. Image in the Public Domain.

not require artists to know architectural norms. Indeed, the painter took the genre as an invitation to flout such conventions.

Decades later, Dietterlin took a less radical position, visible in a drawing in the artist's hand, now in the Louvre, of a painting for an unidentified façade [Fig. 1.2]. By superimposing Doric and Ionic posts in the proportions and succession known from classical monuments such as the Colosseum of Vespasian in Rome, the drawing conveys the structural integrity of the building beneath the painting. At the same time, the fabric beneath wing-footed Hermes and the mirror-bearing figure's foot transgress the entablature, lending the façade a malleable quality absent from most built architecture. Dietterlin's



1.2 Wendel Dietterlin, *Design for a Façade Painting*, 1580s or later, quill with black ink and brush with gold, yellow, maroon, red, green, blue, purple, and gray wash with white heightening on cream laid paper, 26.8 × 28.8 cm, Paris, Musée du Louvre, Département des Arts graphiques, Collection Edmond de Rothschild, 3399 DR / Recto. Photo © RMN-Grand Palais (Musée du Louvre) / Thierry Le Mage.

drawing not only asserts the artist's dispensation as a maker of architectural images to defy the rules of tectonics when rendering fictive structures but also showcases his deep knowledge of architectural theory and building principles. Indeed, if, in Holbein's day, architectural image-making did not require knowledge of architectural theory or building, then by Dietterlin's time, architectural images commonly featured sophisticated meditations on architectural concepts such as the norms of the Orders. Dietterlin's façade design thus asserts that the expertise of the architectural image-maker lies in their ability to break familiar rules of building knowingly, and with style.

The disparities between the architectural images of Holbein and Dietterlin register an intensifying dialogue between the figural arts and architecture in northern Europe throughout the sixteenth century, a development I call architecture's "figural turn." While I have already introduced the idea that architecture appropriated the visual research practices of figural artists, Holbein and Dietterlin's façade designs exemplify a related and complementary trend, in which individuals trained solely as artists likewise acquired increasing architectural savvy. Such interpenetration of disciplinary knowledge arose, as the Introduction has explained, due to the rise of empirical practices in visual research across many disciplines as well as the advent of new media such as drawing on paper and print. However, such bidirectional exchanges between architecture and the figural arts were also mediated by dramatic shifts in the social, religious, and political institutions that formed the markets for images and architecture and policed the knowledge required to produce both.

The present chapter will assess how changing institutional circumstances of fifteenth- and sixteenth-century northern Europe undergirded epistemic transformations that formed the architectural image. In what follows, I examine four key institutional "trading zones" in which art, architecture, and natural philosophy mingled: artist guilds, publishing houses, masons' lodges, and aristocratic courts. I chart how each institution changed its approach to regulating artistic and architectural knowledge during the decades before Dietterlin composed his *Architectura*, as well as how such shifts caused architectural culture and figural arts in northern Europe to trade visual research practices. I argue that, as techniques of observation, description, and figuration came to traverse the institutions of figural arts and architecture, they deepened and multiplied the empirical practices that linked the visual arts and natural philosophy.

#### GUILD

The protagonist of the present book was both a product of shifting institutions of art and architecture as well as an expert at manipulating such volatility to his advantage. The artist eventually known as Wendel Dietterlin the Elder was born as Wendling Grapp in 1550 or 1551 in Pfullendorf, close to Lake Constance, and possibly trained under the painter Philipp Memberger the Elder (d. 1573).<sup>2</sup> We have no other documentary evidence about Wendel's life until the artist settled in Straßburg, where he married local citizen Catharina Sprewer on November 12, 1570.<sup>3</sup> The union with Catharina qualified Wendel to buy property and apply for guild membership and citizenship in a thriving Free Imperial City led by a patriciate as well as a council of prominent tradesmen and artisans.<sup>4</sup> By February 19, 1571, Wendel had changed his surname to "Dietterlin" (Errant Line) when he purchased a residence.<sup>5</sup> By the next day, the artist had acquired Straßburg citizenship and joined the Straßburg artists' guild, the Zunft zur Steltz or "Guild at the Stalk."6 Dietterlin's artistic persona thus emerged with his ascent to guild membership. Nevertheless, as the moniker "Dietterlin/Errant Line" implies, the artist's new credentials did not forge a stable professional identity. Dietterlin joined the

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Guild at the Stalk at a juncture when artist guilds in northern Europe were rethinking how they related professional practices to specific, corresponding forms of artistic knowledge. In the section that follows, I examine how new guild regulations implemented throughout the sixteenth century aspired to police boundaries between artistic disciplines, yet in practice motivated artists like Dietterlin to blend previously delimited professional pursuits, such as architecture, image-making, and publishing.

Since the early Middle Ages, guilds in Europe operated as corporations of tradespeople, guarding members' rights and ensuring production quality to protect the local economy from outside incursion.<sup>7</sup> All guilds defined professional specializations and legislated divisions between trades that reflected current understandings of expert knowledge.<sup>8</sup> Artists' guilds regulated production and managed collaborations between different kinds of artists by determining who could officially join which trades, specifying training requirements, and legislating what labor certain types of artist could perform. Prior to the early 1500s, guilds had distinguished professions by the materials each employed – for instance, likening painters to dyers because both manipulated pigments - promoting a rationale that might be called a "material" paradigm of artistic expertise. The material paradigm of artistic expertise manifests in the division of labor that created works such as the Isenheim Altarpiece, made for the Monastery of St. Anthony in Colmar some seventy kilometers from Straßburg. The altarpiece integrates a shrine crafted between 1490 and 1505 by sculptor Nikolaus Hagenauer (c. 1445-before 1538) [Fig. 1.3] with panels completed between 1512 and 1516 by the painter now widely known as Matthias Grünewald [Fig. 1.3 and Fig. 1.4].9 In other words, the altarpiece was devised by artists with disparate material specializations in separate production campaigns. This is not to say that no dialogue existed between the artistic practices of Hagenauer and Grünewald, for the sculptor's filigreed, botanical tracery [Fig. 1.3] prefigured the painter's fantastic vegetal architectures [Fig. 1.4].<sup>10</sup> But even as a work that combined media, the Isenheim Altarpiece was formed through discrete material contributions.

The material paradigm of artistic knowledge exemplified in works such as the Isenheim Altarpiece came under fire during the Renaissance.<sup>11</sup> In one instance around 1520 – just four years after the Isenheim Altarpiece stood complete – Straßburg sculptor Veit Wagner (d. 1516–1520) protested an incursion on his own "liberal art" (*freie künst*), for local painters had begun carving figures on altarpieces. Wagner worried that the innovation (*nuwerung*) threatened sculptors' rights, complaining that the painters now thought "[...] they [had] the power to administrate, carve, make, use, and profit from the panels, sculptures, and an altarpiece's entire ornamental apparatus."<sup>12</sup> By describing sculpture as a discipline centered on the technique of carving and akin to such liberal arts as rhetoric and geometry, Wagner defined his medium



1.3 Nikolaus Hagenauer (sculptor) and Matthias Grünewald (painter), *Isenheim Altarpiece, inner wings opened*, reconstructed; sculpture 1490–1505, painting 1512–1516, tempera and oil on wood, polychrome limewood, Colmar, Musée Unterlinden. Photo © RMN-Grand Palais (Musée d'Unterlinden) / Stéphane Maréchalle / Mathieu Rabeau.



1.4 Nikolaus Hagenauer (sculptor) and Matthias Grünewald (painter), *Isenheim Altarpiece, outer wings opened*, reconstructed; sculpture 1490–1505, painting 1512–1516, tempera and oil on wood, polychrome limewood, Colmar, Musée Unterlinden. Photo © RMN-Grand Palais (Musée d'Unterlinden) / Stéphane Maréchalle / Mathieu Rabeau.

in the first instance through its distinctive manual and intellectual qualities and thus adopted not the material paradigm of artistic knowledge, but rather what might be called a "technical" paradigm of artistic expertise.<sup>13</sup>

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The rise of the technical paradigm of artistic knowledge one observes in episodes such as the Wagner case occurred for several reasons. Beginning in the fourteenth century, guilds had been expanding and becoming more heterogeneous. What eventually came to be known as Straßburg's Guild at the Stalk had originated as a corporation of painters and goldsmiths in 1362 that later diversified as it appropriated an array of other trades.<sup>14</sup> Even before that transformation, commissions involving multiple media began to rouse conflict between disparate artistic professions. Through episodes such as Wagner's suit, northern Europe began to trade its material paradigm of artistic expertise for the technical paradigm of artistic knowledge.

With the rise of the technical paradigm of artistic knowledge, competition between artistic media became a subject of art. It surfaced, for instance, in Dietterlin's *Raising of Lazarus* [Fig. 1.5], the only surviving panel painting doubtless executed by the artist.<sup>15</sup> Inscribed 1582 or 1587, Dietterlin's composition shows a figure ensconced in a translucent shroud before a throng of



1.5 Wendel Dietterlin, *The Raising of Lazarus*, 1587, oil on firwood panel, 103.7 × 83 cm, Karlsruhe, Staatliche Kunsthalle Karlsruhe, 2181. Image in the Public Domain.

spectators, rising from a raking aperture cut into a cliffside. As two men strain to lower the stone slab from the tomb, a woman lunges forward with outspread arms. Behind the woman stands Christ, clothed in blue robes and a red mantle, calling the body from its crypt with a gesture of blessing. Unlike most other later sixteenth-century depictions of the raising of Lazarus, Dietterlin's panel shows Lazarus fully enshrouded.<sup>16</sup> The fabric displays the colors of grisaille, a technique that involves painting forms in black, white, and gray. Painters since van Eyck and Rogier van der Weyden (c. 1399–1464) had used grisaille to portray figures that resembled monochrome statuary or reliefs, comparing the physical qualities of painting and sculpture.<sup>17</sup> Dietterlin deployed the motif to underscore the technical differences between practices of painting and sculpture. Christ and Mary don iridescent fabrics that evoke the mixing of pigments; men withdraw the grisaille Lazarus from the tomb as the sculptor extracts their figures from the block. Whereas sculptors had long used drapery to suggest anatomical forms, the shadows of Lazarus's facial features just visible beneath his cerements suggest methods for conjuring translucency accessible to painting alone. And while sculptors could have boasted that painters could not match their ability to portray bodies in the round, Dietterlin challenges that advantage by rendering his figures as if viewed from all possible angles. His Raising of Lazarus leverages a technical paradigm of artistic expertise to assert the superiority of painting over sculpture.<sup>18</sup>

As the Guild at the Stalk transformed to accommodate the new, technical paradigm of artistic knowledge, the corporation's requirements for mastery came to anchor artistic specializations and specialized artistic knowledge in specific practices. For painters, the focus became translating observations between different visual fora, from the mind to nature to art.<sup>19</sup> While Guild protocols of 1516 stipulated that prospective master painters should invent their qualifying Meisterstuck (masterpiece) from their imaginations, the rules from 1547 allowed painters to derive their masterpieces from their own genius (ingenio), observed life, or a print.<sup>20</sup> In other words, whereas the 1516 test probed artists' capacity to translate mental forms to painting, the test from 1547 also defined one's ability to transpose forms between media such as print and painting, or between observed life and painting, as evidence of painterly mastery.<sup>21</sup> The change indicates the rising importance of print and empirical practices of visual observation and description as painters' tools. Notably, the rules from 1547 align the transposition of visual information from observation to image with the translations between artistic media through which such nature studies proliferated - for instance, from drawing or painting to print, or indeed from those figural media to architecture. It was under this regime that Dietterlin sought Guild membership in 1571, and infused architectural culture with the painter's practices of empirical visual research.

Artist guilds' turn to defining practices as the sources of artistic expertise and professional identity nevertheless could not counteract the mounting pressures from other quarters that pushed artists to practice beyond their areas of certification. Some fifty years before Dietterlin settled in Straßburg, the Reformation had exacted profound changes in the cultural landscape of the Holy Roman Empire that precipitated such pressure. Works like the Isenheim Altarpiece, fitted with vivid paintings of suffering saints just two years before Martin Luther (1483–1546) revealed his ninety-five theses, could not endure under the post-Reformation wariness of devotional images. Between 1524 and 1530, Reformers removed the devotional images from Straßburg's churches, quashing demand for religious art and forcing artists to seek alternative revenue streams.<sup>22</sup> In a famous passage of his Kunstbüchlin (Little Art Book) of 1538, Straßburg artist Heinrich Vogtherr the Elder complained that "[...] the [...proliferation] of the Holy Word, now, in our times, throughout the German nation, has caused a notable diminishment and rupture in all subtle and liberal arts, such that many have determined to abandon them, and now take up other forms of handwork."23 The narrowing of post-Reformation commissions pressured artists to overstep their official professions. Some responded by petitioning for the right to practice beyond their guildsanctioned trade; others, like Wagner, complained about those upstarts. Still others, like Vogtherr, responded by selling ornament and especially architectural designs, including in printed works and books like the artist's Kunstbüchlin.<sup>24</sup> Because architecture rarely contained devotional or confessionally specific imagery, the making of architectural images became a popular refuge of post-Reformation artists.

Within the professionally volatile environment of post-Reformation art, architecture occupied a distinctive position. Unlike other arts, architecture was policed by guilds in Renaissance Europe only to the extent that those bodies influenced where members who worked as architects could travel. Guilds did not impose standards for training in the building trades, nor did artists who devised buildings join guilds as architects in the first instance.<sup>25</sup> The material and even the technical paradigm of art guild epistemology failed to accommodate the ascendant Vitruvian tradition, which understood architecture to span numerous artistic materials and practices. For some, the breadth of knowledge required to form architectural images was overwhelming. In 1571, the carpenters of the Guild at the Stalk required prospective masters to create a masterpiece evidencing knowledge of Vitruvian architectural Orders, but repealed the rule when few applicants complied.<sup>26</sup> Because of its relative material and technical complexity, architecture became one of the most attractive refuges of northern artists seeking to expand their repertoires and incomes, for it transcended guild attempts to codify artistic knowledge in terms of experience.

Artists' incursions into architecture stirred controversy from guilds to the pages of architectural treatises. In 1542, a mason and a carpenter in Antwerp quarreled over whether an individual with no experience in masonry had the right to design architecture.<sup>27</sup> In 1547, masons in Straßburg indicted façade painters for adorning buildings with outlandish decorations, chiding the artists for venturing beyond their understanding (erkandtnuss) of architecture.<sup>28</sup> In his Premier Tome de l'Architecture (First Book on Architecture), published in 1567, architect Philibert de L'Orme (c. 1510-1570) meanwhile warned patrons seeking architectural advice not to appeal to "[...] some master-mason or master carpenter as is the custom or to some painter, some notary or some other person who is supposed to be qualified but more often than not has no better judgment than the patron himself."29 De L'Orme contends that both craftsmen who lack design skills and artists who have never supervised building projects can as little claim architectural expertise as those who, like notaries, lack any artistic training whatsoever. In all the above cases, individuals cited practical experience in building as a prerequisite of sound architectural judgment, understanding, and mastery. Their opponents also believed in the value of practical experience as a foundation of architectural expertise but held that mastery in architectural design need not originate on the construction site and could instead stem from firsthand experience in other visual arts. In the debate about artist-architects, both sides championed practical, sensory experience, but held different opinions about how experiential knowledge translates across media and disciplines.

Even in the face of challenges from architecture's old guard, post-Reformation artists who pursued architecture or made architectural images gained the ability to define their careers and indeed artistic expertise on their own terms. Vogtherr saw architecture as an outlet for fantastic inventions, contending that through "[...] strange and most difficult pieces, which [...] display much fantasy and contemplation [...] enlightened visual artists will be roused [...] to bring forth even higher and subtler arts [...] so that art might again ascend and receive its due regard, and that we [Germans] might again outstrip other nations."<sup>30</sup> The *Kunstbüchlin* concludes with a woodcut showing a plinth carrying a solid marked with the geometrical formulae of contemporary masons beneath a grotesque capital reminiscent of the "strange and most difficult pieces" mentioned in Vogtherr's preface [Fig. 1.6]. Whereas the base embodies northern conventions of building design, the capital visualizes the novel, artistic mode of architectural invention Vogtherr championed through his architectural images.

Artists followed Vogtherr's exhortation to craft architectural images. Three decades later, Dietterlin arrived in a Straßburg rife with woodcarvers, glass painters, metalworkers, and façade painters who adorned buildings with architectural images and circulated designs for architectural ornament in numerous



1.6 Heinrich Vogtherr the Elder, *Capital and Base*, woodcut illustration in Vogtherr's *Ein Frembds vnd wunderbars kunstbüchlin* [...] (Straßburg: Vogtherr, 1538) or later edition, Rijksmuseum, Amsterdam, RP-P-OB-9886(R). Image in the Public Domain.

media. Sensing an opportunity, Dietterlin infiltrated the culture of architectural image-making by becoming a façade painter.<sup>31</sup> Between 1574 and 1575, the artist adorned the now-vanished residence and administrative seat of Straßburg's archbishop, called the *Bruderhof* (Fraternal Palace), with gargoyles, banderoles, and other ornaments in his earliest known façade paintings.<sup>32</sup> Further jobs followed. Around 1582, it seems Dietterlin painted the headquarters of the Lodge of the Straßburg Masons and Stonecutters, a project I will address in detail below. By 1583, Dietterlin had grown important enough to capture foreign commissions and to refuse a contract from the powerful Fugger family, as he was otherwise occupied in Haguenau, some thirty kilometers north of Straßburg.<sup>33</sup> By 1585, the artist had purchased a house near his first residence, perhaps to accommodate a growing workshop.<sup>34</sup> He acquired a third house with a garden by the same year.<sup>35</sup> In June 1589, Dietterlin demanded payment for painting the *Neue Bau*, or "New Building," the first Straßburg

edifice to feature the superimposition of Doric, Ionic, and Corinthian Orders modeled in ancient Roman architecture.<sup>36</sup>

Dietterlin was aware that his success derived in part from using architectural images to skirt guild jurisdiction over relationships between visual arts. Thus, as in his *Raising of Lazarus* panel painting, Dietterlin's façades stage comparisons among figural media and between the figural arts and architecture. The painter devised one façade [Fig. 1.7] with the winged Nemesis with one foot atop the wheel of fortune, a figure recognizable from her dagger of treachery, batons of power, and cornucopia, which contains a gourd that appears to give her an erect phallus. Urn-bearing Prosperity and mirror-clutching Hardship flank the goddess. Though the *grisaille* group resembles stone sculptures, one could also imagine the figures as façade paintings or a combination of painting and sculpture. Nemesis, a deity of capricious change, illusions, and retribution,



1.7 Wendel Dietterlin, *Design for a Façade Painting with Nemesis or Fortune*, 1580s or later, quill with black ink and brush with gold, maroon, green, blue, and gray wash with white heightening on cream laid paper, 27 × 27.8 cm, Paris, Musée du Louvre, Département des Arts graphiques, Collection Edmond de Rothschild, 3398 DR / Recto. Photo © RMN-Grand Palais (Musée du Louvre) / Thierry Le Mage.

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personifies the material and technical flexibility instantiated in Dietterlin's drawing.<sup>37</sup> Notably, Dietterlin's Nemesis shares the wings, wheel, baton and gourd of the vixen in Dürer's print of a goddess hovering over a stormy mountainscape, now known as *Nemesis* or *The Great Fortune*, her body devised with Vitruvian proportions and thus implicitly architectural [Fig. 1.8].<sup>38</sup> By adapting Dürer's engraved yet architectonic emblem of competition and mercuriality into his medially indeterminate façade drawing, Dietterlin positioned print as a platform for comparing and even aligning the techniques of the figural arts and architecture – a concept to which I will return in later chapters.

For now, though, it is enough to note that Dietterlin's success and autonomy grew along with his engagement in architectural culture via the making of architectural images. By the 1570s, he and other northern artists could attain fame as architecture experts without any firsthand



1.8 Albrecht Dürer, *Nemesis (The Great Fortune)*, c. 1501, engraving, sheet:  $14 \times 10 \text{ 1/16}$  in. (35.6  $\times$  25.5 cm), New York, The Metropolitan Museum of Art, Gift of Henry Walters, 1917, 17.37.1. Image in the Public Domain.

knowledge about construction. The development signals that artistic practices of architectural image-making came to join practical experience in building as valid paths to architectural authority. Guilds' efforts to tightly define expertise as a factor of practice had unwittingly forged the understanding that numerous types of experience could feed a single kind of knowledge.

### PUBLISHING HOUSE

While art guilds of sixteenth-century northern Europe debated the connections between practices of visual research in art and architecture, publishers began to forge new intersections of artistic and architectural knowledge and stimulate architecture's figural turn. Indeed, whereas guilds sought to delimit forms of artistic knowledge, the publishing industry transmitted oncespecialized expertise within and across disciplines, including the visual arts. Like colleagues who sought to infiltrate architecture, many printers came to the profession through art, and thus had reason to challenge conventional limitations on the purviews of artistic trades.<sup>39</sup> Just as Dietterlin made art that pitted the formal qualities of one medium against another, publishers facilitated verbal and visual comparisons of the artistic media that stimulated the circulation of visual research practices between architecture and the figural arts. Indeed, as Chapter 3 will establish, the development of art, architecture, and natural philosophy books became an arena in which communities of artists, architects, scientists, and writers transposed techniques of visual research from one discipline to another. At the present juncture, however, I wish to address the publishing house as an interdisciplinary institution and a key player in architecture's figural turn.

Straßburg had performed an outsize role in the figural turn in architecture, for during the sixteenth century, it anchored the German-speaking world's third most productive publishing industry behind Basel and Frankfurt, and one of the Holy Roman Empire's most active book trades. The local publishing industry had catalyzed guild disputes over boundaries between regulated artistic professions and forms of expertise: during Dietterlin's lifetime, Straßburg's Guild at the Stalk and Council of XXI heard numerous complaints by and against artists who wished to pursue arts in which they lacked Guild certification. For instance, between 1571 and 1572, book printer Theodosius Richel (d. 1605) protested the harshness of his fine for cutting woodblock prints relative to the punishment received by the woodblock cutter (*Formschneider*) Bernhard Jobin, who the Council of XXI had merely rebuked for "[...] intruding upon the manual practices [*Handtierung*] of the book printers [...],"<sup>40</sup> when Jobin began to pursue publishing. Though the Council dismissed Richel's case, its divergent treatment of Jobin indicates that

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publishing had emerged as a volatile and contested ground in which artists pursued opportunities beyond their own guild-sanctioned métiers. The same atmosphere would foster the interdisciplinary incursions of Dietterlin's *Architectura*, for at least three editions of the treatise would emerge from Jobin's press.

Besides serving as a hotbed of exchange between the figural arts and architecture, Straßburg publishing also foregrounded natural philosophy. As of 1530, scientific publications - some Latin, but many vernacular - could compete with Latin humanist texts and vernacular books on Protestant theology as the genre in which the city printed the most volumes.<sup>41</sup> Here, building upon the encyclopedia of Gregor Reisch (c. 1467–1525) as well as the surgery and distillation manuals of Hans von Gersdorff (c. 1455-1529/30) and Hieronymus Brunschwig (c. 1450-1512/13), Carthusian monk Otto Brunfels (c. 1488–1534) and physician Lorenz Fries (1485/90–1530/32) published works on botany; Christian Egenolff (1502–1555) and Jakob Cammerlander (c. 1500– c. 1549) released technical manuals on such subjects as gunpowder and metallurgy. Jobin, too, printed voluminous scientific literature, from the medical writings of Heinrich Wolff (1520-1581), to astronomical studies by Helisäus Röslin (1545-1616), Thomas Finck (1561-1656), and Nicholas Reimarus Ursus (1551-1600), to alchemical lore from Raimundus Lullus (c. 1232-1316) and Paracelsus. Many such books discussed techniques derived from artisanal practices.42

Artistic knowledge also shaped the production of Straßburg's natural philosophical books. To such publications, Jobin brought experience as a practicing Formschneider, distinguishing his catalog by deftly integrating text with images. The publisher recruited Tobias Stimmer to create hundreds of woodcut book illustrations, broadsides, and single-sheet prints for the atelier, thus establishing a visual style for his house. Acting as a kind of art director, Jobin manipulated the scale and format of prints in the service of vivid reportage. He sponsored numerous broadsides, as well as fold-out bibliographic woodcuts for natural philosophical texts such as Röslin's Theoria Nova Coelestium Meteoron (Theory of the New Heavenly Meteor), published in 1578.43 One woodcut [Fig. 1.9] visualizes the German skies, figuring the fixed stars as inky asterisks and the nebulous Milky Way and the fleeting tails of comets with delicate hatch marks. It also charts the locations and dates of comets and a new star observed since the 1530s, offering a textured, geographically specific, and diachronic summary of celestial apparitions that collated years of astronomical observations on a grand scale. As ensuing chapters will show, the tactics of visual research on display in these and other Straßburg natural philosophical publications would shape the empirical ethos of Dietterlin's Architectura.

In addition to richly illustrated natural philosophical books, Jobin's atelier published works on music, art, and architecture. Architecture and natural



1.9 Helisäus Röslin?, SPHÆRA NOVA COMETARIVM ET MIRACVLORVM DEI, woodcut illustration in Helisäus Röslin's THEORIA NOVA COELESTIVM METEΩPΩN (Straßburg: Bernhard Jobin, 1578), Madrid, Biblioteca Nacional de España, GMm/344(6), sig. H6<sup>r</sup>. Image from the collections of the Biblioteca Nacional de España. Photo © Biblioteca Nacional de España.

philosophy coalesced in the fortification textbook Jobin printed for architectcartographer Daniel Specklin as *Architectura* in 1589.<sup>44</sup> Specklin, one will recall, started his career as a silk embroiderer, but turned to surveying and finally fortification, thus joining the many sixteenth-century artists who infiltrated architecture through their skills in visual representation. Specklin's *Architectura* relates the interconnected technologies of surveying, ballistics, fortification, and machine design through woodcuts of his own invention [Fig. 1.10]. Specklin's prints use architectural forms to illustrate principles of mechanics, visualizing, for instance, ranges of projectiles launched from ramparts with different



1.10 Daniel Specklin, (designer) and unknown printmaker and hand-colorist, *Instruments and Inventions for Fortification*, hand-colored woodcut illustration in Specklin's *ARCHITECTVRA von Vestungen* [...] (Straßburg: Bernhard Jobin, 1589), Strasbourg, Bibliothèque nationale et universitaire de Strasbourg, R.12, sig. Ccv<sup>r</sup>. Source: Bibliothèque nationale et universitaire de Strasbourg.

configurations. Publishers such as Jobin provided artist-architects means to circulate technical, natural philosophical knowledge by figuring architectural forms.

Within such publications, architectural images and their pictorial qualities were regarded as potent tools for conveying knowledge. Multiple copies of Specklin's *Architectura* received rich hand-coloring with gilded accents, elements often planned by sixteenth-century artist-authors but organized by publishers in a bid to attract elite audiences.<sup>45</sup> The additions indicate Jobin envisioned a readership for Specklin's *Architectura* that valued the vivid figuration of architectural forms, even the most utilitarian of defensive structures.

The stakes of successfully conveying natural philosophical ideas such as the principles of mechanics through published architectural imagery ran high. Fortification treatises such as Specklin's *Architectura* facilitated communication between architect-engineers and the rulers who used their architectural designs for defensive purposes. For instance, a copy of Specklin's *Architectura* was conveyed to Heinrich Julius, Duke of Braunschweig-Lüneburg (1564–1613), who employed Hans Vredeman de Vries as he was fortifying his seat at Wolfenbüttel with bastions devised by the Straßburg architect.<sup>46</sup> Imagery such as Specklin's representation of ballistic ranges from various types of ramparts not only vivified textual descriptions of architectural and scientific matters, but trained rulers like Duke Heinrich Julius to incorporate visual observation and analysis into their decision-making processes in such projects. The effective figuration of architectural knowledge in publications concerning mechanics and other engineering topics supported local and regional security, even while cultivating patrons' modes of empirical thinking.

Under similar pretenses, Jobin, as publisher-*cum-Formschneider*, collaborated with Specklin to produce architectural images that buttressed Straßburg's reputation as a center of technical prowess. Around 1566, Jobin carved a monumental woodcut of Straßburg Cathedral after designs by Specklin, which was reissued in numerous editions until 1574 [Fig. 1.11].<sup>47</sup> The sculp-tural qualities of both the woodcut medium and the edifice echo in everything from the minutely rendered tympana of the portals to the myriad geometrical perforations piercing the spire. Staffage loitering before the west front evidence the church's massive scale. The astonishing detail with which the print describes the minster and its architectural sculpture promotes an aesthetic of firsthand observation sustained through Specklin's experience as an architect and surveyor as well as through Jobin's sculptural chops.

While such visual qualities situate the image in the present tense, verses by Jobin's son-in-law, Johann Fischart (1545/7–c. 1590), also narrate the history of the church from its beginnings in 499 as a woodwork heathen temple to its completion as a stone Christian edifice in 1449, rendering the image, like the astronomical print of 1578, both a work of immediate reportage and a document of diachronic change.<sup>48</sup> Fischart boasts that the finished spire stands "[...] 574 feet tall, and transparent despite all decoration, held together with stone and metal. Therefore, one writer [...] also placed this attractive tower among the wonders of the world."<sup>49</sup> In relating the Cathedral's history, the poet marshals both precise measurements and visual observations about the spire's ornamental complexity and



1.11 Bernhard Jobin (block-cutter) after Daniel Specklin (designer), *Straßburg Cathedral*, devised 1566, printed 1574–1575 or later, woodcut in black ink on two sheets of laid paper, 55.1 × 39.1 cm, Strasbourg, Cabinet des Estampes et des Dessins de Strasbourg, Inv.77.2010.0.342. Photo Musées de Strasbourg, M. Bertola.

structurally improbable transparency to tout the technical genius that formed it. If the Cathedral-as-building underscores Straßburg's native architectural and engineering prowess, the visual document in which Specklin and Jobin depicted the minster reinforces that message by embodying technical accomplishment in both empirical observation and printmaking.<sup>50</sup> Binding verse, print, and architecture, Jobin, Specklin, and Fischart's Cathedral broadside embodies the interdisciplinary confluences of artistic, architectural, and technical, natural philosophical expertise that flourished in the publishing houses of Straßburg and other cities in sixteenth-century northern Europe.

Like Jobin, Dietterlin learned printmaking to develop a theoretical framework and a medial platform for circulating ideas that synthesized architecture with other arts and sciences. Of all Straßburg presses, Jobin's atelier formed the strongest bond with the painter. Dietterlin's Liber 1 of 1593, his Second Book of 1594, and the 1595 edition of his Liber II were all released by Jobin's heirs; it is probable that the 1594 edition of his Liber II was as well.<sup>51</sup> Though Jobin died in 1593, Dietterlin likely negotiated at least the first of the releases while the publisher lived, and so it is possible to imagine the issuing of key installments of his Architectura as a collaboration between the two artists. The Architectura complemented Specklin's more technically oriented treatise of the same name - and indeed augmented Jobin's program of other richly illustrated publications - with architectural etchings that engaged an even more diverse range of natural philosophical disciplines. Dietterlin's Architectura releases for the Jobin press represented the culmination of the catalog's investment in vividly describing the world, and in transposing such knowledge between media as well as artistic and scientific disciplines.

Texts and images produced in Jobin's circle attest to the ways in which printers in sixteenth-century northern Europe came to foster social contexts and medial platforms that facilitated exchanges between art, architecture, and natural philosophy. Publishing enterprises like Jobin's instantiated new frameworks for discussing the relationships between the arts, whether arising from common observational and descriptive practices or shared approaches to design. Scholars, writers, artists, and architects in the orbit of printers such as Jobin grappled together to describe and manipulate the changing relationships between the figural arts, architecture, and natural philosophy. Images as well as visual forms of argumentation anchored and synthesized their interdisciplinary endeavors. As ensuing chapters will show, Dietterlin and his peers would use the interdisciplinary rhetoric of empirical description that arose from this milieu not only to compare the visual arts, but as well to draw connections between the common inquisitive techniques of visual arts, architecture, and science.

#### LODGE

In contrast to artist guilds and publishing houses, a third institution – masons' lodges – promoted the figural turn in architecture by cleaving, sometimes paradoxically, to traditions. Among the masons' lodges that registered the rise

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of artists' empirical practices of visual research in the architectural culture of sixteenth-century northern Europe, few did so more profoundly than that of the Straßburg masons and stonecutters. Straßburg's masons and stonecutters originally occupied a building known as the Frauenhaus (House of Our Lady), which had been established to the south of the Cathedral by 1347.52 The Frauenhaus also served as the seat of Unserer-Lieben-Frauen-Werk (Works of Our Dear Lady), the corporation that raised funds for the Cathedral's construction and maintenance.53 In 1579, master-mason Hans Thoman Uhlberger (d. 1608) began a new west wing for the Frauenhaus, installing on the ground floor a spacious hall that likely stood complete by 1581 [Fig. 1.12].<sup>54</sup> There, the masons and stonecutters could convene and receive members of Unserer-Lieben-Frauen-Werk, as well as clergy, local officials, or representatives from other lodges, possibly in politicized encounters.55 Because the interior could act as a setting for intra-Lodge politics as well as diplomacy with outside bodies, it had to convey the masons' and stonecutters' architectural expertise and authority over architectural practice - a steep order in the era of architecture's figural turn. Here, the evidence suggests that Dietterlin nevertheless collaborated with the Straßburg masons and stonecutters to form an interior that asserted the Lodge's artistic, architectural, and natural philosophical prowess.<sup>56</sup>



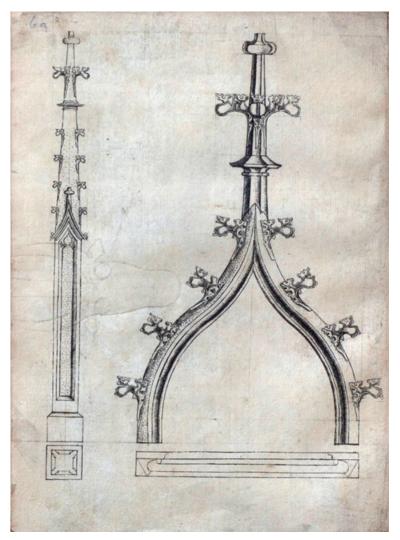
1.12 Maurice Thaon, *Hall of the Straßburg Masons and Stonecutters, Musée de l'Œuvre Notre-Dame, Strasbourg*, photograph after 1931, Charenton-le-Pont, Médiathèque du patrimoine et de la photographie, MH0164528. Photo © Ministère de la Culture – Médiathèque du patrimoine et de la photographie, Dist. RMN-Grand Palais / Maurice Thaon.

The history, composition, and exceptional status of the Straßburg Lodge as an artistic corporation profoundly shaped the commission. Lodges of masons and stonecutters in the Holy Roman Empire had organized the workers charged with realizing the cathedrals of the German-speaking lands since the twelfth century.<sup>57</sup> Unlike the architects of Dietterlin's day, who might draft forms for execution in various artistic media, master-masons worked to create and maintain buildings. Like the architects of later times, masons who belonged to lodges acted as free agents capable of developing the autonomy of their professional body, while those who belonged to masons' guilds remained subject to the jurisdiction of the hosting city.58 Masons and stonecutters answered to a master-mason who served as an artistic director and coordinator of works. This so-called magister lapidum also managed the logistics and division of labor on site, stewarding the lodge's architectural designs and supervising the trainees.<sup>59</sup> In the Regensburg Ordinance of 1459, Straßburg's sodality of masons and stonecutters was designated the High Chapter of the imperium, and its master-mason the Supreme Judge.<sup>60</sup> Because Straßburg hosted the Empire's flagship lodge, the city's master-masons set standards for architectural knowledge and practice across much of northern Europe.

Beginning in the mid-fourteenth century, various developments nevertheless began to temper the masons' ability to regulate architectural knowledge and shape architectural professions. Up to that time, stonecutters, masons, and architectural sculptors typically labored for lodges, but other types of architectural practitioners in sixteenth-century northern Europe did not. Bricklayers, carpenters, woodworkers, and architects more often belonged to local artists' guilds. Between the middle of the fifteenth century and the middle of the sixteenth century, the autonomy of the masons weakened, and the boundaries between lodges and artist guilds became more fluid.<sup>61</sup> Straßburg's stonemasons and bricklayers formed a joint guild in 1332, and the bricklayers gained a guild of their own in 1402.<sup>62</sup> Beginning in the first half of the fifteenth century, master-masons increasingly left lodges to join guilds due to diminishing ecclesiastical commissions and increasing civic commissions.<sup>63</sup>

The rise of print from the fifteenth century on posed other challenges to the lodges' control over architectural expertise and trades.<sup>64</sup> In the years before 1500, there emerged in the southern German-speaking lands a small but influential corpus of architectural incunabula. It included the *Fialenbüchlein* (*Book on Finials*) from around 1486 or thereafter, attributed to the goldsmith and engraver Hanns Schmuttermayer (fl. 1487–after 1518), as well as D[as] *puechle[n] d[er] fialē[n] gerechtikait (The Little Book on the Properness of Finials)* (1486), the so-called *Geometria deutsch* (*German Geometry*) (c. 1486–1490), and *Wimpergbüchlein* (*Little Book on Ornamental Gables with Tracery*) (c. 1486–1490), all issued by Regensburg master-mason–publisher Mathes Roriczer (c. 1430/40–before 1495).<sup>65</sup> Unlike contemporary art treatises and academic geometry

publications, the masons' manuals addressed artisans, and eschewed complicated proofs and theoretical explanations for practical instruction.<sup>66</sup> In contrast to contemporary architecture books from Italy, they contained numerous illustrations – among the earliest architectural images in any printed book.<sup>67</sup> Here, too, artistic technologies began to inflect architectural knowledge. For instance, Schmuttermayer applied his expertise in incising metal to create some of the first-ever bibliographic engravings [Fig. 1.13]. Through such imagedriven publications, potentially unlimited bodies of artists and architects could access masonic knowledge formerly held by a circumscribed initiate.<sup>68</sup> In using



1.13 Hans Schmuttermayer, *Finials*, engraved illustration in Schmuttermayer's [*Fialenbüchlein*] Durch die gnade des almechtigen gots vmb das gebete vil erberger personen zupesserūg vnd zyrungē den gepewen der [...] kirchen [...] (Nuremberg: Georg Stuchs, c. 1489), Nuremberg, Germanisches Nationalmuseum, Inc. 8° 36045, fol. 2<sup>v</sup>. © Germanisches Nationalmuseum.

artistic technologies such as engraving to convey architectural knowledge, south German architectural incunables framed architectural images and the artistic practices of visual research that formed them as sources of architectural expertise that could compete with the masons lodges' conventional, oral modes of knowledge transmission.

In the wake of the lodges' waning political power and amidst the rise of artists' architectural publications, masons and other types of architects experienced enhanced pressure both to acquire liberal educations and to master other artistic media. Ryff's Architectur (1547), a companion to his translation of Vitruvius's De architectura from 1548, dramatizes the situation in a dialogue between an Architectus and a Baumeister (Building Master). The Baumeister insists that "The most famous architect Vitruvius [...] demands [...] that the conscientious architect who wishes to bear the exalted name [of that profession] must be experienced and practiced in various [learned] arts as well as the artful work of craft."<sup>69</sup> Ryff's Baumeister chides masons for not adapting to the new regime: "In these times our common masters-of-works and stonemasons have a brutish understanding, for they are not only inexperienced [unerfaren] in mathematics but in all good arts, foremost in geometry (which is the basis and foundation for [all arts])."70 Since the time of the masons' incunabula, architectural geometry demanded skill in the figural art of drawing. By requiring architects to gain experience in figural and liberal arts through geometry, Ryff's dialogue promotes a Vitruvian mode of architectural interdisciplinarity. It also supports a technical paradigm of artistic knowledge in which modes of visual inquiry can pass between the arts, another concept of architectural interdisciplinarity that threatened conventional forms of masonic epistemic authority.

It was in the wake of such challenges that Uhlberger and his colleagues fashioned the new Hall of the Straßburg Masons and Stonecutters as an impressive *summa* of masonic knowledge – specifically, a testament to masonic mastery over artistic modes of visual research that allowed the builders to figure and subvert the forms of nature through architecture. In the interior's southwest corner, a network of twelve ribs runs from the perimeters of the vault to the center, but four of the ribs terminate suddenly, after converging in a pair of bosses [Fig. 1.14]. The arrangement creates a vacuum at the apex, gouging the tensile system whereby vaults typically distribute vertical stresses into horizontal stresses so the structure remains standing. Architecture such as Uhlberger's seemingly unstable vault had earned criticism from authors like early art historian Giorgio Vasari (1511-1574), whose theories about artistic manner, invention, and canon had already provoked various textual and visual responses from Jobin's circle and were known among Straßburg's intelligentsia.<sup>71</sup> The Vite de' più eccellenti pittori, scultori e architettori (Lives of the Most Excellent Painters, Sculptors, and Architects), which debuted in 1550 under Vasari's name, contained a technical preamble likely composed by Cosimo



1.14 Attributed to Wendel Dietterlin (painter); Hans Thoman Uhlberger (architect), *Vault with Grotesque Ceiling Painting*, architecture 1579–1582, painting 1582 or later, Strasbourg, Hall of the Straßburg Masons and Stonecutters, Musée de l'Œuvre Notre-Dame. Photo Musées de Strasbourg, M. Bertola.

Bartoli  $(1503-1572)^{72}$  that had complained how Germans "[...] made a *maledizione* of little tabernacles one over the other, with so many pyramids and points and leaves, that it seems impossible not only that they can stand, but that they should be able to support themselves, and they have more the semblance of being made of paper than of stone or marble."<sup>73</sup> The *Lives* denigrates the so-called *maniera tedesca* (German manner) of architecture for its excessive adornments, improbable tectonics, and duplicitous materiality.<sup>74</sup> All were qualities that would initially seem to signal a lack of regard for the close observation of nature that formed the core of artistic practices of visual research.

To be sure, structural caprices such as tracery bound with fictive ropes and broken ribbing à la Uhlberger's vault had flourished in northern Europe during the decades around 1500.<sup>75</sup> But because such configurations lacked normal tectonic interdependencies, only an advanced understanding of geometry permitted masons to make them stand. Architects used such conceits to question the aesthetics of tectonic stability and assert an uncanny mastery over architectural materials and techniques.<sup>76</sup> For savvy viewers, Uhlberger's "impossible" construction betrayed not architectural ignorance, but a conscious revival of a historical form that signaled deep expertise in tectonics and geometry. Uhlberger posed his improbable vault as a performance of masonic structural mastery by inscribing one of its bosses with his own insignia and the other with the mark of the Straßburg Lodge, aligning the ingenious illusions of the broken

tracery with the masons' very artistic identities.<sup>77</sup> The marks refute Italian critics such as Vasari (and indeed Ryff) by presenting expertise in geometry as a lynchpin of the Lodge's architectural enterprise.

Implicit in the Lives' criticism of maniera tedesca architecture was a disdain for the style's apparent apathy toward classical paradigms of architectural naturalism, another strike against the masons' artistic ability to observe and emulate received models.78 Uhlberger contradicted criticisms concerning the "unnatural" appearance of the German manner of building by augmenting his broken tracery with forms that resemble pruned branches or vines. Known as Astwerk (branch-work), such tracery had first flourished in northern Europe between 1470 and 1515, the dawn of the figural turn in northern architecture and its earliest encounters with the renaissance of classical paradigms of building design. Astwerk, for instance, echoed Vitruvius's assertion that columnar building arose in emulation of trees. It also recalled the dwellings of bound branches that German humanists, emulating the writings of Tacitus, conjectured that their Teutonic ancestors had crafted in ancient forests.<sup>79</sup> Uhlberger's Astwerk vault thus revives a classical and regionally specific paradigm of architecture that both appears to draw its forms from visual research into nature and engages ancient literary tropes.<sup>80</sup> It frames the masons as architects who can excel at visually researching and figuring nature, despite their occasional indulgence in building seemingly unnatural structures.

Still, Italian authors had also described vegetal and pointed-arch architectures of the so-called German manner as works of structural unsoundness. A letter to Pope Leo X (1475–1521) of c. 1518 that Raphael drafted at first in cooperation with the author Baldassare Castiglione (1478-1529) and later with the assistance of the humanist and papal secretary Angelo Colocci (1467-1549) asserted that such configurations were structurally inferior to the postand-lintel architecture of ancient Romans.<sup>81</sup> In addition to participating in a pointed-arch system Italians found tectonically suspect, Astwerk figures a material - wood - that could not uphold stone, and thus echoed the Lives' description of stone architecture that seems fragile because it resembles other, weaker materials such as paper. But despite Italian concerns about the apparent and actual fragility of ligneous Astwerk, Uhlberger's vault remains standing. It proves, contrary to Italian detractors, that the masons had mastered visual research into nature and its structural capacities. Thus, complementing the structural conceits of broken tracery, Astwerk displayed a classically engaged and regionally specific dialectic of naturalism and antinaturalism that undergirded much architectural figuration in sixteenth-century northern Europe.

This dialectic of architectural naturalism and antinaturalism also manifests in the cycle of painted grotesques pervading the walls and ceiling of the Hall, part of a larger suite of interior and external wall paintings added to the *Frauenhaus*  from 1581/1582. The frescoes in the Hall of the Straßburg Masons and Stonecutters are impossible to attribute with certainty.<sup>82</sup> Since their initial creation, the paintings have deteriorated significantly, such that in some areas, it is almost impossible to discern the composition. Some of their faded forms were repainted in 1924 and 1930 in two restoration campaigns that are believed to have preserved the essential elements of the work, if not the hand of the original artist(s).<sup>83</sup> Parts of the cycle are known only through a series of aquarelles made by the painter Marga Bretzl (1884–1967) between 1933 and 1934.<sup>84</sup> No sixteenth-century document names the author(s).

Still, most modern scholars have agreed that Dietterlin likely devised the frescoes in the Hall of the Straßburg Masons and Stonecutters, in addition to frescoes on the exterior of the Frauenhaus.<sup>85</sup> Various forms of evidence undergird their attribution. First, one must consider the circumstances of patronage. As one will recall, Dietterlin had painted the façade and interior walls of Straßburg's now-vanished Bruderhof, the seat of the Archbishop of Straßburg and the property of the Cathedral Canons who also controlled the Lodge, with banderoles and gargoyles between 1574 and 1575. Dietterlin's record of executing grotesque wall paintings for the Canons would have given the Lodge compelling reasons to recruit him to paint the Frauenhaus. In fact, Dietterlin is also widely regarded as the author of a now-vanished cycle of paintings on the building's external façade.<sup>86</sup> In addition, a fragment of a sixteenth-century chronicle, presumed to be the Chronik der Stadt Strassburg (Chronicle of the City of Straßburg), and now known only from a 1901 transcription, names Dietterlin as the painter of what has been identified by Liliane Châtelet-Lange as the socalled Große Stube (Great Room), also in the Frauenhaus, and by Anne Wolff as the Hall of the Straßburg Masons and Stonecutters.<sup>87</sup> Whatever the identity of the space mentioned in the transcription, that the Masons and Stonecutters certainly charged Dietterlin to adorn a portion of the Frauenhaus makes it reasonable to conjecture that the artist painted the Hall.

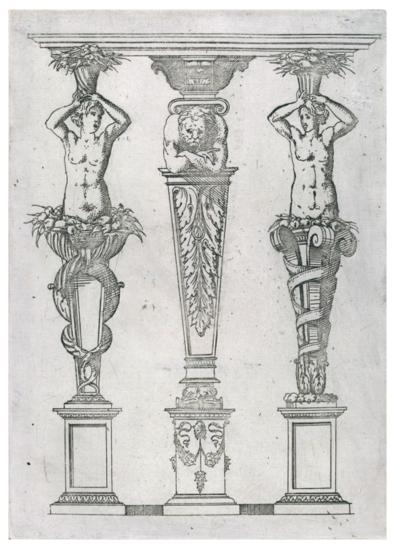
Second, there is the matter of the frescoes' content. Of the three painters based in Straßburg in 1582 who boasted reputations equal to such a prestigious commission – Dietterlin, Tobias Stimmer, and David Kandel (c. 1527–before 1596) – only Dietterlin specialized in grotesques.<sup>88</sup> The constellation of motifs comprising the Hall paintings moreover aligns with the range of grotesque forms observable in Dietterlin's *Architectura*.<sup>89</sup> A basket-topped *canephore* [Fig. 1.15] echoes a term pictured in Jacques Androuet Du Cerceau the Elder's (c. 1515– after 1584) 1565 engraving series, *termes et caryatides* [Fig. 1.16]. The fauna-beset trellises, auricular flourishes, masks, and banderoles descend from a grotesque print series devised by painter-architect Cornelis Floris II (1513/4–1575) and engraved by Jan van Doetechum the Elder (active 1554–c. 1600) between 1556 and 1557 [Fig. 1.17].<sup>90</sup> The strapwork, meanwhile, resembles motifs published throughout the 1560s and 1570s by Hans Vredeman de Vries.<sup>91</sup> A similar



1.15 Attributed to Wendel Dietterlin, *Grotesque Term*, 1582 or later, wall painting, Strasbourg, Hall of the Straßburg Masons and Stonecutters, Musée de l'Œuvre Notre-Dame. Photo Musées de Strasbourg, M. Bertola.

combination of ornaments would later converge, for instance, in a grotesque composition from Dietterlin's *First Book* of 1593 [Fig. 1.18].<sup>92</sup> The print's repetition of the same mix of Du Cerceau, Floris, and Vredeman motifs visible in the Hall of the Straßburg Masons and Stonecutters in various *Architectura* plates corroborates the theory that Dietterlin also devised the paintings.<sup>93</sup>

We can locate important origins of sixteenth-century Europe's understandings of such grotesques in Vitruvius's *De architectura*, which condemned grotesque wall painting as a genre that often featured problematic architectural imagery:<sup>94</sup>



1.16 Jacques Androuet Du Cerceau the Elder, *Three Caryatids and Telamons*, 1546–1549, etching, 16.2 × 11.7 cm, London, Victoria and Albert Museum, Rosenheim Collection, E.1211-1923.
© Victoria and Albert Museum, London.

Reeds are set up in place of columns, as pediments, little scrolls, striped with curly leaves and volutes; candelabra hold up the figures of aediculae, and above the pediments of these, several tender shoots, sprouting in coils from roots, have little statues nestled in them for no reason, or shoots split in half, some holding little statues with human heads, some with the heads of beasts.<sup>95</sup>

Vitruvius took issue with two aspects of such grotesque imagery and its architectural representations.<sup>96</sup> Writing as an architect, the author disliked grotesques' improbable tectonics. "How," he queried, "[...] can a reed really sustain a roof, or a candelabrum the decorations of a pediment, or an acanthus shoot, so soft and



1.17 Cornelis Floris II (inventor) and Jan van Doetechum the Elder and Lucas van Doetechum (etchers), *Modern Grotesque with Strapwork*, 1554, etching, sheet: 12 1/16 x 8 1/8 in. (30.6 x 20.7 cm), New York, The Metropolitan Museum of Art, Harris Brisbane Dick Fund, 1926, 26.57.61(8). Image in the Public Domain.

slender, loft a tiny statue [...]?"<sup>97</sup> Writing as a theorist of architecture, he also disparaged the fantastical aspects of grotesque designs, complaining that "[...] these things do not exist, nor can they exist, nor have they ever existed[.]"<sup>98</sup> In sum, grotesques' structural absurdities as well as their unlikely combination of forms seemed to Vitruvius to negate the decorous imitation of nature that the author-architect so prized in architectural composition.



1.18 Wendel Dietterlin, *Grotesques*, etched illustration in Dietterlin's *ARCHITECTVRA vnd Aūsstheilung der V. Seüln. Das Erst Būch* (Stuttgart: s.n., 1593), Strasbourg, Bibliothèque nationale et universitaire de Strasbourg, R.10.002, I, pl. 38. Source: Bibliothèque nationale et universitaire de Strasbourg.

Vitruvius's antigrotesque philippic, as relevant to architecture as it was to painting, achieved a revival in sixteenth-century writings such as the *Lives*' invective against the German manner of architecture, which draws from this passage of *De architectura*.<sup>99</sup> Dietterlin's Hall paintings nevertheless flout such

Vitruvian censures against unnatural structures. His vegetal grotesques incorporate precariously stacked candelabra, rickety trellises, supple strapwork, and spindly vines that mime not only the content and structures of classical grotesques and modern grotesque prints, but also the botanical forms and seeming instability of Uhlberger's broken *Astwerk* tracery. They accompany fictive oculi that seem to pierce the ceiling where the *Astwerk* breaks, painted architecture that joins the fractured tracery in undermining the interior's apparent stability.

I have argued that the broken tracery and Astwerk architecture of the Hall staged an ingenious dialectic of naturalism and antinaturalism. Dietterlin's frescoes complemented that dynamic by figuring improbable, grotesque structures composed, paradoxically, of naturalistic forms. Whereas sixteenth-century grotesques typically featured stylized flora and fauna, these drolleries portray individual plant and animal species.<sup>100</sup> Dietterlin may have worked from direct observation to render specimens native to Straßburg's environs, but the cycle's combination of local and exotic species, such as a cocoa pod, suggest that the artist also consulted his era's burgeoning body of printed, illustrated botanical literature.<sup>101</sup> Works such as Herbarum vivae eicones ad naturae imitationem (Lively Images of Herbs Imitated from Nature), published at Straßburg with text by Otto Brunfels (c. 1488-1534) and woodcuts by Hans Weiditz (before 1500-c. 1536) from 1530 to 1536, consolidated a spate of flora similar to that represented in the Hall frescoes. Among the Hall's painted plants, a specimen with trefoil leaves corresponds to Weiditz's Helleborus; one with spade-formed leaves is identifiable as Asarum; and a specimen with pointed leaves and purple flowers [Fig. 1.19] recalls Acorus [Fig. 1.20].<sup>102</sup> Since there followed numerous printed, illustrated herbals, from Hieronymus Bock's (1498–1554) Neu Kreütter Buch (New Herbal), first published at Straßburg in 1539, to Leonhart Fuchs's De historia stirpium (On the History of Plants) first published in 1542, it is difficult to determine which prints the Hall grotesques might emulate.<sup>103</sup> Subsequent editions of Bock's Straßburg-published New Herbal featured illustrations of living specimens by Dietterlin's Straßburg colleague David Kandel, raising the possibility that Kandel also contributed to the Hall grotesques.<sup>104</sup> Whatever its origins, the botanical imagery of the Hall paintings indicates an interest in natural history and indeed naturalistic representation that inflects the space's explorations of antinaturalism.

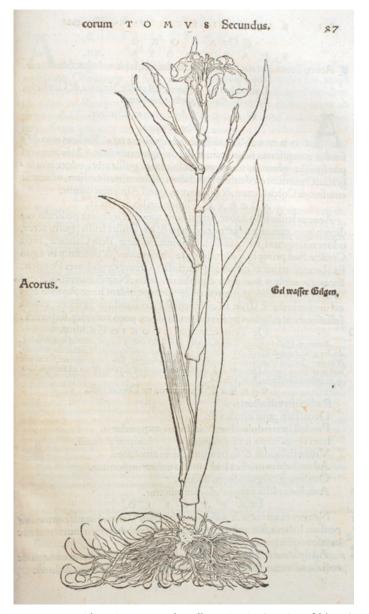
Indeed, the contradictions between the naturalism of Dietterlin's painted flora and the unnatural tectonics of their grotesque frameworks figured a dichotomy between naturalistic representation and synthetic invention that had also flourished in ancient literature. Take the now-vanished portion of the cycle recorded in the 1933 aquarelles [Fig. 1.21], in which a bird dives to steal grapes from behind a drawn curtain. The image makes an apparent allusion to the story of Zeuxis and Parrhasius, narrated in Pliny the Elder's (d. 79 CE)



1.19 Attributed to Wendel Dietterlin, *Grotesque Ceiling Painting* [detail], 1582 or later,Strasbourg, Hall of the Straßburg Masons and Stonecutters, Musée de l'Œuvre Notre-Dame.Photo Musées de Strasbourg, M. Bertola.

*Naturalis historia (Natural History)* (1469<sup>1</sup>). When the two painters orchestrate a contest to identify the superior artist, Zeuxis renders grapes so deceptive that birds try to consume them, but Parrhasius paints a fictive curtain that convinces even Zeuxis, thus demonstrating superior mimetic talent.<sup>105</sup> In alluding to this story, the composition allies the Hall's paintings and architecture with classical discourses of naturalistic representation.

But in combining the birds and grapes of Zeuxis with the curtain of Parrhasius in a single composition, the Hall painter also engages a second Zeuxian anecdote with very different implications. Following Cicero (106–43 BCE), Pliny's *Naturalis historia* had also related how Zeuxis captured the supernatural beauty of Helen of Troy by constructing her likeness from the choicest features of five maidens of Croton.<sup>106</sup> Taken together, the Zeuxis and



1.20 Hans Weiditz, *Acrous.*, woodcut illustration in Otto Brunfels's *NOVI HERBARII TOMVS* .II (Straßburg: Johann Schott, 1531), Zurich, Zentralbibliothek Zürich, NB 253 | G, II. p. 47. https://doi.org/10.3931/e-rara-51632 / Public Domain Mark.

Parrhasius anecdote and the tale of the maidens of Croton contrast what Pliny calls "icastic" invention, or the representation of objects in the observable world (as staged, for instance, in the competition between Zeuxis and Parrhasius), and fantastic invention, or the combination of icastic representations into composites such as Helen's portrait or grotesques, which do not necessarily align with the observable world.<sup>107</sup> Writers from at least the time of



1.21 Marga Bretzl after Wendel Dietterlin, *Grotesques*, 1933–1934, aquarelle, Strasbourg, Médiathèque André Malraux, Médiathèques de la Ville et de l'Eurometropole de Strasbourg, MS 979.

Alberti had cited the story of Zeuxis and the maidens of Croton to argue that that fantastic invention could overcome the limits of nature as a source of inspiration.<sup>108</sup> In the wake of this tradition, Dietterlin's hybrid imagery, while

not entirely naturalistic, nevertheless satisfied classically approved modes of artistic composition. The presence of such imagery in the Hall of the Straßburg Masons and Stonecutters underwrites the lodge's mastery of artistic practices of visual research, from the synthesis of printed and observed natural specimens to the integration of such forms into local and classical image traditions.

Indeed, Uhlberger applied a parallel strategy of fantastic naturalism in the double capital crowning one of the Hall's piers [Fig. 1.22]. The upper capital incorporates masks, trellises, strapwork, and banderoles familiar from Dietterlin's grotesques as well as what appear to be portraits of Uhlberger and his wife, and the lower capital features a classical Ionic volute, acanthus, and egg-and-dart trim. In superimposing a grotesque capital over a classical Ionic capital, Uhlberger remixes the arrangement of a classicizing capital superimposed over an unclassical base in the concluding image of the *Kunstbüchlin* [see Fig. 1.6], as if to fulfill Vogtherr's wish for a revival of German art through fantastic design. By combining the best qualities of antique, medieval, and Renaissance manners from both sides of the Alps, as Zeuxis had amalgamated



1.22 Hans Thoman Uhlberger, *Double Capital*, 1579–1582, Strasbourg, Hall of the Straßburg Masons and Stonecutters, Musée de l'Œuvre Notre-Dame. Photo Musées de Strasbourg, M. Bertola.

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the most excellent features of Croton's maidens, Uhlberger promoted the contemporary *maniera tedesca* as a style worthy of esteem by proponents of northern and classical artistic ideals alike.<sup>109</sup> Uhlberger's stylistic eclecticism situates the masons' centuries-long breadth of experience as a source of endlessly renewable architectural knowledge.<sup>110</sup> Regarded alongside Dietterlin's grotesques, his architecture frames skill in transposing and remixing observations from multiple visual and textual sources as crucial for excellence in both painting and architecture.

In sum, the confluence of architecture, architectural sculpture, and painting at the Hall of the Straßburg Masons and Stonecutters articulated a powerful retort to the masons' critics by announcing a potent alliance between the practices of the masons and the visual research techniques of figural arts and natural philosophy. By imitating medicinal herbs known to the ancients and recorded from life by modern artists, the Hall's painters engaged empirical modes of observation and description shared by botanists. They also fulfilled the Vitruvian ideal of medically informed architectural expertise, meeting Ryff's exhortation that architecture experts possess a liberal education. Aligned with the Hall's Astwerk, their botanical grotesques moreover suggest that Uhlberger's design likewise descends from firsthand observations of plant life, mediated by print. The printed origins of the Hall's painted botanical grotesques in turn indicate that, by the 1580s, the masons saw print culture as an artistic resource to incorporate into their own visual traditions. In emulating printed grotesques and plants, the Hall revels in Italian tropes that cast the German manner of building as unnatural, vegetal, and "papery" architecture. The apparent veracity of the painted specimens also contradicts Italian criticism of the unnatural qualities of building in the German manner, while expropriating for the masons mimetic skills of nature study once monopolized by artists. This is a signal moment in the history of architectural images and empirical philosophy in sixteenth-century northern Europe.

## COURT

If Dietterlin's activities in the Hall of the Straßburg Masons and Stonecutters exemplify architecture's waxing engagement with the observational and descriptive practices of the figural arts and natural philosophy, the artist's work at court shows how artists in sixteenth-century northern Europe used parallel tactics of visual research to dominate architectural culture. His opportunity came in 1583, when architect Görg Beer (d. 1600) was recruited to design a pleasure palace (*Lusthaus*) for the residence of Ludwig III, Duke of Württemberg, at Stuttgart [Fig. 1.23].<sup>111</sup> The New Lusthaus featured a Great Hall with a barrel vault that seemed to hover over the yawning interior without columnar support, an impressive structure that demanded an equally



1.23 Matthäus Merian the Elder, *Palace, Pleasure Palace, and Courtly Garden at Stuttgart*, c. 1616–1617, quill with brown ink, lead pencil, and wash in gray on laid paper, sheet: 10.5 × 20.3 cm, Stuttgart, Staatsgalerie Stuttgart, Graphische Sammlung, C 6101. Photo: © Staatsgalerie Stuttgart.

ambitious decorative program.<sup>112</sup> Ludwig, counseled by cartographer Georg Gadner von Garneck (1522-1605) and theologian Lucas Osiander (1534-1604), initially ordered court painter Hans Steiner (1560-1610) to adorn the ceiling with landscapes and maps representing Württemberg territories.<sup>113</sup> However, Gadner later revised that plan in a missive to the Duke on August 6, 1587, arguing that "[...] it would contradict the art of painting to paint landscapes strangely out of perspective and overhead, that they need to be viewed from below. Instead, such a ceiling accommodates floating images, clouds, and flying things."<sup>114</sup> Here Gadner alludes to a perspective-pictorial room, that is, an interior in which the ceiling's perimeters, rendered in linear perspective, yield to an apex rendered in aerial perspective, often to create the impression of a threedimensional sky.<sup>115</sup> More broadly, the cartographer demands that the Hall integrate a mode of visual representation distinct from that of conventional landscape or cartography, mandating a different kind of visual research. Gadner evidently persuaded the Duke, for Steiner's plans went unrealized.<sup>116</sup> After a three-year impasse, Dietterlin joined the project.<sup>117</sup>

Gadner harbored a specific vision for the Great Hall's decorative program. In a letter composed in the summer of 1590, Gadner advised that the ceiling should be adorned with: "I. The Creation of the World, 2. The Lamb of God, and 3. The Last Judgment."<sup>118</sup> While the image of the first element is lost, a drawing attributed to Dietterlin's circle records a perspective-pictorial *Apocalyptic Vision of the Twenty-Four Elders at the Throne of God*, likely with the aforementioned Lamb of God [Fig. 1.24].<sup>119</sup> Dietterlin's own gold-tinged



1.24 After Wendel Dietterlin, *Apocalyptic Vision of the Twenty-Four Elders at the Throne of God*, after 1590, quill and black ink and brush with gray and black wash and white heightening on two sheets of thick cream laid paper, 55.7 × 39.8 cm, Hamburg, Hamburger Kunsthalle, Kupferstichkabinett, 1954–95. © bpk / Hamburger Kunsthalle / Christoph Irrgang.

*Last Judgment* [Fig. 1.25], which also fuses lateral perspective at the lower edge with aerial perspective toward the apex of the composition, and incorporates gold leaf highlights, probably served as the presentation or contract drawing for the third scene.<sup>120</sup> With its wrathful Christ amidst an imposing wall of



1.25 Wendel Dietterlin, *The Last Judgment*, 1590, quill with black and dark brown ink with gray and black wash, heightened with white and gold on brown, on laid paper expanded with black-painted framing edges,  $46.8 \times 34.4$  cm, Stuttgart, Staatsgalerie Stuttgart, Graphische Sammlung, Loan 1967 Freunde der Staatsgalerie Stuttgart e.V., C 1967/GVL 200. Photo: © Staatsgalerie Stuttgart.

figures, Dietterlin's *Last Judgment* shares the subject and compositional formula of Michelangelo's (1475–1564) eponymous fresco, which the Straßburg artist could have known through prints by Giorgio Ghisi (1520–1582), Martino Rota (c. 1520–1583), or Johan Wierix (1549–c.



1.26 Johannes Wierix (printmaker) after Michelangelo (painter) and Martino Rota (printmaker), *The Last Judgment*, 1575–1579, engraving, 31.1  $\times$  23.0 cm, Rijksmuseum, Amsterdam, RP-P-OB-66.855. Image in the Public Domain.

1618) [Fig. 1.26].<sup>121</sup> Michelangelo, whom Vasari lauded for mastering the triad of painting, sculpture, and architecture, offered Dietterlin an esteemed model for the successful integration of the figural arts and architecture. Dietterlin's *Last Judgment* nevertheless sought to surpass Michelangelo's by synthesizing the nebulous, celestial architectures of Christ with the solid,

terrestrial framework of the Devil to suggest the unity of architecture and the figural arts he planned for the Great Hall.<sup>122</sup>

Given his substantial contributions to the Great Hall, Dietterlin was not content to remain a mere painter. By March of 1592, the artist had complained to Gadner that it "[...] would be embarrassing [to him] to earn the same as others who are unequal in art and work [...]" and that he wanted "[...] nothing to do with the Court Painter [Steiner]."<sup>123</sup> Dietterlin was subsequently made primary supervisor of the project.<sup>124</sup> In other words, he took the role of an artistic director or *Kunstintendant*: an individual charged with coordinating, but not necessarily building, rulers' architectural projects.

The figure of the artistic director had first emerged during Dietterlin's lifetime, as urban artists gained freedom to pursue architectural opportunities at court. Since artistic directors orchestrated diverse artists, they had to transcend the specialized knowledge art guilds and lodges promoted.<sup>125</sup> Unsurprisingly, the power that court architects and artistic directors consolidated rankled building masters. Florence-trained architect Friedrich Sustris (c. 1540-1599) clashed with a master-builder at the Wittelsbach court, who could not comprehend why Sustris planned buildings by creating drawings rather than crafting wooden models, as had been the local convention.<sup>126</sup> This highlights how artistic modes of visual research, such as drawing, remained controversial in northern architectural culture until well into the sixteenth century. Still, Wilhelm V, Duke of Bavaria (1548-1626), insisted that Sustris should exercise ultimate decision-making power in planning and guiding architectural initiatives, and that all the various types of artisans involved in such projects must answer to him.<sup>127</sup> Artistic directors like Sustris and Dietterlin gained authority over other artists and architects in virtue of their ability to integrate artistic tactics of visual research as well as managerial savvy in the execution of architectural projects.

In 1619, Friedrich Brentel (1580–1651) depicted the results of Dietterlin's engagement as the artistic director of the Great Hall [Fig. 1.27] in one of the only visual documents of the space made prior to the destruction of the New Lusthaus in the nineteenth century. Brentel's engraving suggests how the disparate pictorial elements of the Great Hall synthesized artistic and scientific modes of visual description within a unified architectural context.<sup>128</sup> While the perspective-pictorial ceiling paintings arose through mathematically complex compositional formulae for representing the spatiality of the observed world, the landscapes and genre scenes arose from nature study. Beer's barrel vault provided a capacious, atmospheric canvas for Dietterlin's spatial illusions and naturalistic topographies, even as the same features underscored the vault's exceptional tectonics.<sup>129</sup> Few spaces in northern Europe had ever synthesized painting, sculpture, and architecture as well as genres of visual representation to such profound effect.<sup>130</sup> By combining the Great Hall's celestial and terrestrial



1.27 Friedrich Brentel, *True Counterfeit Image of the Room in the Princely Pleasure Palace in Stuttgart*, 1619, engraving, 39.4 × 51.8 cm, Stuttgart, Staatsgalerie Stuttgart, Graphische Sammlung, A 31982. Photo:
© Staatsgalerie Stuttgart.

scenes as well as its disparate media into an immersive, material, temporal, and spiritual totality, Dietterlin and his team forged an artificial microcosm.<sup>131</sup> The rapt spectators in Brentel's engraving underscore what archival evidence confirms of the Great Hall's reception – namely, that the interior prompted viewers to engage in similar acts of vivid description, albeit of the verbal variety.<sup>132</sup> Amidst its era's shifting institutions of art, architecture, and natural philosophy, Duke Ludwig's microcosmic Great Hall demonstrates what was possible when artistic and natural philosophical modes of image-making infiltrated architectural practice. Only at a court, beyond the guilds and masons' lodges that policed artistic and architectural practice, could Dietterlin have so profoundly melded figural description with architecture.

Indeed, courts provided artists like Dietterlin access to relationships and resources useful for integrating artistic, architectural, and natural philosophical knowledge. While in Stuttgart, Dietterlin befriended architect-engineer and Württemberg *Landarchitekt* ("territorial architect") Heinrich Schickhardt the Younger (1538–1635).<sup>133</sup> Schickhardt served as architect-engineer to Ludwig and Ludwig's successor Friedrich I, Duke of Württemberg (1557–1608),

constructing fortifications, hunting lodges, castles, and churches, and, from 1599 to 1600, traveling to Rome to sketch ancient and modern buildings.<sup>134</sup> Sometimes called the "Württemberg Leonardo," Schickhardt was a product of a court environment that rewarded those who integrated artistic and natural philosophical knowledge. In line with such ideals, Schickhardt compiled one of the richest recorded architect libraries of the Renaissance, a resource Dietterlin almost certainly accessed and indeed shaped. An inventory of Schickhardt's library from 1631 refers to "Wendel Dieterlein [*sic*] of Straßburg, my dear and good friend,"<sup>135</sup> and cites all German installments of Dietterlin's *Architectura*. As a liberally educated product of a court environment that prized the deft integration of different forms of expertise, Schickhardt embodied the synthesis of architectural and other knowledge for which Dietterlin strove.

Schickhardt's inventory documents a vast and heterogeneous corpus of nearly 525 books, many published before Dietterlin's departure from Stuttgart in 1593 and potentially available for the artist to consult as he drafted his Architectura.<sup>136</sup> The architect organized his library catalog topically, from "architecture, which is adorned with many other noble arts,"<sup>137</sup> to painting and sculpture, as well as perspective, religion, law, history, alchemy, geometry, fortification, and medicine. Schickhardt's architecture book collection included editions and translations of Vitruvius's De architectura as well as numerous modern authors. Some such volumes, such as Jacopo Barozzi da Vignola's (1507-1573) posthumously published guide to representing fictive architecture in perspective, the Due regole (Two Rules) of 1583, could have helped Dietterlin plan the Great Hall.<sup>138</sup> Other treatises in Schickhardt's collection, such as Serlio's Quarto Libro (Fourth Book) (1537), would inform Dietterlin's Architectura.<sup>139</sup> Yet Dietterlin did not only study the architecture books held in Schickhardt's library. The plethora of geometrical, mythological, theological, alchemical, astrological, and anatomical content in Dietterlin's Architectura suggests that the artist accessed substantial literature on those various topics during his treatise's gestation between 1590 and 1593. Along with the abundant natural philosophical publications of sixteenth-century Straßburg, Schickhardt's library constitutes one of the likeliest sources for the Architectura's deep engagement with mathematical, philosophical, and scientific themes.<sup>140</sup>

During the sixteenth century, transformations to architectural institutions of northern Europe allowed artists like Dietterlin to penetrate architectural culture as never before, and their professional fortunes waxed with their engagement in architecture. Artist guilds came to define expertise as a factor of experience but failed to gain control over architectural knowledge as the conditions of the post-Reformation art market moved artists to compete over opportunities and pursue architectural projects. The rise of publishers as simultaneous arbiters of European artistic, architectural, and natural

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philosophical discourse made architectural writing and image-making more susceptible to the influence of other arts and sciences, a trend embodied in collaborations between architect Daniel Specklin and Bernhard Jobin, whose heirs would publish multiple installments of Dietterlin's Architectura. Contrary to popular wisdom, masons' lodges came, through projects such as the Hall of the Straßburg Masons and Stonecutters, to embrace print culture and engage in discourse regarding artistic and scientific modes of observation and visual description. The rise of the artistic director in northern courts institutionalized artistic and scientific forms of observation and description as vital to architectural expertise, and rewarded talent in coordinating disparate forms of artistic, architectural, and natural philosophical knowledge. The final quarter of the sixteenth century saw architectural knowledge grow more valuable to artists and witnessed architectural culture grow more beholden to the influence of artists and natural philosophers. If Dietterlin could earn fame for his architectural savvy despite having never built anything, it was because his ability to forge connections between diverse arts and sciences now mattered more than deep experience in a single art.

The evidence of the rise of artistic practices of visual research in northern architectural culture that one can cull from Dietterlin's painting career pales in comparison to what can be learned from his magnum opus, the *Architectura*. Destroyed by fire, dismantled, and ravaged by time, none of the wall or façade paintings that cemented Dietterlin's lifetime fame survived the nineteenth century intact. Only the *Architectura*, the final and summative enterprise of Dietterlin's career, persists as a testament to the ways in which the artist synthesized a century of intersecting artistic, scientific, and architectural practices to make architectural images into platforms for the visual inquiries of natural philosophy. To reveal how Dietterlin and his peers made architectura that I now turn.

## NOTES

- See Christian Klemm, "Der Entwurf zur Fassadenmalerei am Haus 'Zum Tanz' in Basel. Ein Beitrag zu Holbeins Zeichnungsœuvre," Zeitschrift für schweizerische Archäologie und Kunstgeschichte / Revue suisse d'art et d'archéologie / Rivista svizzera d'arte e d'archeologia 29, no. 4 (1972): 165–175.
- 2. A portrait of the artist bound in most copies of the 1598 Architectura records Dietterlin's death at 49 in 1599, allowing an estimate of his birth year: "WENDELINVS DIETTERLIN PICTOR ARGENTINENSIS. OBYT A°: CI3.I3.IC.ÆTAT: IL" See Ohnesorge, Wendel Dietterlin, 1. On Dietterlin's master, see Kurt Martin, "Der Maler Wendel Dietterlin," in Festschrift für Karl Lohmeyer, ed. Karl Schwingel (Saarbrücken: West-Ost Verlag, 1954), 14–29, here 23. A brief, general introduction to the artist and his Architectura is Petcu, "Wendel Dietterlin & l'Architectura."

- Strasbourg, Archives de la Ville et de l'Eurométropole de Strasbourg [hereafter AVES], 3. microfiche of M 106, Hochzeit Büch von Anno 1556 biß 1578 (Marriage Register of the Neue Kirche, 1556-1578), 206, under November 12, 1570: "Wendel Grapp, Maler, Catharina, Hanss Sprewer zu Ehrstein hinderlassene Dochter." / "Wendel Grapp, painter, Catharina, daughter of the deceased Hanss Sprewer of Ehrstein." I have confirmed my transcription of the original text with reference to Ohnesorge, Wendel Dietterlin, 2; and Hans Rott, Quellen und Forschungen zur Südwestdeutschen und Schweizerischen Kunstgeschichte im XV. und XVI. Jahrhundert. III. Der Oberrhein. Quellen I (Baden Pfalz, Elsass) (Stuttgart: Strecker und Schröder Verlag, 1936), 235, which nevertheless differ slightly from the archival record.
- On Straßburg in this period, see Thomas A. Brady Jr., Ruling Class, Regime and 4. Reformation at Strasbourg 1520–1555 (Leiden: Brill, 1978).
- The transaction is recorded in Strasbourg, AVES, Série KS, Chambre des Contracts 1571, 5. Box 155, Protokolle der Kontraktsube (Protocols of the Contract Register), February 19, 1571, Notar Kügler, fol. 232<sup>v</sup>: "Wendling Grapp genant Dieterlin der Moler zu Strassburg [...]." / "Wendling Grapp, called Dietterlin, the painter in Straßburg [...]." I have confirmed my transcription of the original text with reference to Ohnesorge, Wendel Dietterlin, 1, which nevertheless differs from the archival record by adding "von Pfullendorf" after "Dieterlin."
- 6. The events are recorded in Strasbourg, AVES, Série 4 R, Box 104, Bürgerbuch II, 1543-1618, 348, under February 20, 1571: "Wendling Grapp genant Dietterle hat das burgkrecht empfangen von Catharin Spreuerin und dient zur steltzen." / "Wendling Grapp, called Dietterlin, has attained citizens' rights from Catharina Sprewer and serves at the stalk [Straßburg artists' guild]." Here as transcribed in Rott, Quellen 1, 235; with reference to Antoine Stehlé, Le Deuxième Livre de Bourgeoisie de Strasbourg (Strasbourg: Archives municipales de Strasbourg, 2001), 183.
- A recent synthesis of the vast literature on this and other aspects of the guild system is 7. Arnd Kluge, Die Zünfte (Stuttgart: Franz Steiner Verlag, 2009).
- See, for example, Jean-Robert Zimmerman, Les compagnons de métiers à Strasbourg de début 8. du XVIe siècle à la veille de la réforme (Strasbourg: Librairie Istra, 1971).
- On the dating of the sculptural program, see, for instance, Wilhelm Vöge, Niclas Hagnower. 9. Der Meister des Isenheimer Hochaltars und seine Frühwerke (Freiburg im Breisgau: Urban Verlag, 1931), 11; on the dating of Grünewald's paintings, see, for example, Ruth Mellinkoff, The Devil at Isenheim: Reflections of Popular Belief in Grünewald's Altarpiece (Berkeley, CA, Los Angeles, and London: University of California Press, 1988), 1.
- See Gregory C. Bryda, "The Exuding Wood of the Cross at Isenheim," The Art Bulletin 10. 100, no. 2 (2018): 6-36, here 27-28.
- See, for instance, Baxandall, The Limewood Sculptors, 93. C.f. Smith, The Body of the II. Artisan, 37, which identifies origins of the shift already in the thirteenth century.
- 12. The episode is recorded in Strasbourg, AVES, Série III, ancien Gewölbe unter der Pfalz [G. U.P.], Cod. 11, Complaint of Veit Wagner against the painters, c. 1520: "[...] das sie macht haben, tafelen, bilder und ein gantze ziere uf ein altar zu verdingen, schneiden, machen, bruchen, und zu nießen [...]." Here, as transcribed in Rott, Quellen I, 269.
- On the emerging distinctions between the value of materials and value of skill and labor in 13. the art of Renaissance Europe, see Baxandall, The Limewood Sculptors, 93.
- Friedrich Carl Heitz, ed., Das Zunftwesen in Strassburg. Geschichtliche Darstellung begleitet 14. von Urkunden und Aktenstücken (Strasbourg: Friedrich Carl Heitz, 1856), 52.
- The most comprehensive introduction to the panel is Martin, "Der Maler Wendel 15. Dietterlin," 19-22.
- Ibid., 21. 16.
- See, for instance, Denis Coeckelberghs, "Les grisailles et le trompe-l'œil dans l'œuvre de 17. Van Eyck et de van der Weyden," in Mélanges d'archéologie et d'histoire de l'art offerts au Professeur Jacques Lavalleye, ed. Jacques Lavalleye, Franz De Ruyt et al. (Louvain: Bureuax du Recueil, Bibliothèque de l'Université, 1970), 21-34.

- 18. In implying an agon between painting and sculpture, *The Raising of Lazarus* participates in socalled *paragone* discourse, a foundational account of which is John White, "*Paragone*: Aspects of the Relationship between Sculpture and Painting," in *Art, Science, and History in the Renaissance*, ed. Charles S. Singleton (Baltimore: The Johns Hopkins University Press, 1967), 43–108. The subject's extensive bibliography is cited throughout Rudolf Preimesberger, *Paragons and Paragone: Van Eyck, Raphael, Michelangelo, Caravaggio, Bernini*, trans. Sabine Eiche and Fiona Elliot (Los Angeles: Getty Publications, 2011).
- An overview of the painter's regulations in 1516 and 1630 occurs in August Schricker, "Ordnungen der Strassburger Malerzunft," Jahrbuch für Geschichte, Sprache und Literatur Elsass-Lothringens 3 (1887): 99–105.
- 20. Strasbourg, AVES, Série IX, Zunft zur Stelz Nr. 2, Artikel Büchs eÿner Ersamen Gesellschafft der Zünfft zur Steltzen [hereafter Artikel Büchs], 162, August 13, 1547: "Wie aüch bißher diejenigen, so maister worden, ihre maisterstückh auss eÿgenen köpffen und nicht anders machen sollen, Alss wöllen unssere herren ÿetzůnd freÿ gestelt haben, dass die kunfftigen maÿster ihr probestück auß eigenem Ingenio oder von lebendigen oder gestochenen dingen ohn männiglichs intrag, abcontrofaÿen und mahle mögen. Actum den dreÿzehten Augusti Anno CLVii." I have confirmed my transcription of the original text with reference to Schricker, "Ordnungen," 103, where the text is falsely identified as originating from the orders of 1630 and not transcribed diplomatically. On the Straßburg Meisterstuck in Dietterlin's time, see also Ohnesorge, Wendel Dietterlin, 3.
- 21. On the rise of theoretical vocabulary related to artistic representation after life during the sixteenth and early seventeenth centuries, see Claudia Swan, "Ad vivum, naer het leven, from the life: Defining a Mode of Representation," Word & Image: A Journal of Verbal/Visual Enquiry 11, no. 4 (October–December 1995): 353–372.
- 22. On the iconoclasms, see Lee Palmer Wandel, Voracious Idols and Violent Hands: Iconoclasm in Reformation Zurich, Strasbourg, and Basel (Cambridge: Cambridge University Press, 1995), 103–147.
- 23. Heinrich Vogtherr, Ein Frembds vnd wunderbars kunstbüchlin allen Molern, Bildschnitzern, Goldschmiden, Steinmetzen, Schreinern, Platnern, Waffen un Messer schmiden hochnutzlich zü gebrauchen, Der gleich vor nie keins gesehen, oder inn den Truck kommen ist [hereafter Kunstbüchlin] (Straßburg: Heinrich Vogtherr, 1538), Florence, Biblioteca Nazionale Centrale di Firenze, V.MIS 1089.7, last consulted October 30, 2023, www.google.co .uk/books/edition/\_/7HjqoGBB8xoC?hl=en%26gbpv=1, sig. Aii<sup>r</sup>: "[...] auß sondrer schickung seines heyligen worts, jetz zů vnsern zeytten in gantzer Teütscher nation, allen subtilen vnd freyen Künsten, ein merckliche verkleinerung vnnd abbruch mit gebracht hat, Dardurch vil verursacht, sich von sollichen künsten ab zü ziehen, uñ zů andern handthierungen greiffen."
- 24. On this phenomenon, see Heuer, The City Rehearsed, 16.
- See Catherine Wilkinson, "The New Professionalism in the Renaissance," in *The Architect: Chapters in the History of the Profession*, ed. Spiro Kostof (Oxford and New York: Oxford University Press, 1977), 124–160, here 133.
- 26. The relevant document, which I have not been able to examine in person, is preserved as Strasbourg, AVES, Série 9, Charpentiers 1, *Der Schreiner Neuw Meister Stück* [...], 1571, fol. 43: "Die übrigen neuen Theill sollen zu den obern Corpus und dem Crantz genommen, und das Oberst Friess oder Hauptgesims, wie auch alle andere Gesims an den gantzen Casten, nach recht ARTT UND PROPORTZ DER COLONUMEN ODER SEULEN, die einer gebrauch will ausgetheilt und gemacht werden."/ "The abovementioned new piece should, on the upper part and the crown, and the uppermost frieze or main entablature, as well as the other entablatures of the whole cabinet, also be distributed and made according to the correct MANNER AND PROPORTION OF THE COLUMNS." Here, as transcribed in Françoise Lévy-Coblentz, *L'Art du Meuble en Alsace, Tome 1: Du Gothique au Baroque, 1480–1698* (Strasbourg: Librairie Istra, 1975), 92–93. On the ensuing debate, see Lévy-Coblentz, 101–103.

- 27. Hessel Miedema, "Over de waardering van architekt en beeldende kunstenaar in die zestiende eeuw," *Oud Holland* 94, nos. 2/3 (1980): 71–87, here 74–76.
- Strasbourg, AVES, Série 9, Zunft zur Stelz Nr. 2, Artikel Büchs [...], 159–160, August 13, 28. 1547: "[...] die maurer, undt ihr außtreichen belangent, haben ermelte unser herren auß bewegenden und ehehafften ursachen erkandt, das diselbigen sich fürthien aller hohen farben, alss roth, blau, grün, sonderlichen aber der Ölfarben, zu dem, alles bild undt Laubwerckhs, in ausstreichung der häusser enthalten, dessen ab- undt müssig steh, undt zum verfassüng der thür und fenster gestell, tach und anderer gesÿmbßen, auch der quarteren, sich der darzu gehörenden natürlichen steinfarben gebrauchen, daran benügig sein, und die mahler ferners oder weiters nit bekümmern noch beschweren sollen. Doch ist ihnen den maureren das masswerckh, wie sie es von alter herbracht haben, durch diese erkandtnuß unbenommen [...]." / "The masons, and with concern for painting, have complained to our lords on compelling and honorable causes that [the painters] employ all manner of intense colors, such as red, blue, and green, and especially oil colors, and moreover maintain all manner of images and garlands in painting houses, which looks contrary and liberal; and that it would be sufficient in doorways and window frames, ceilings, and other entablatures, and [other] parts to use only natural stone colors, and that the painters should not concern themselves or complain further. For after all, the masons outstrip the painters in understanding of measurement [in architecture], as they [the masons] have passed it down since ancient times." I have confirmed my transcription of the original text with reference to Schricker, "Ordnungen," 101, where the text is falsely identified as originating from the orders of 1630 and not transcribed diplomatically.
- 29. Philibert de L'Orme, LE PREMIER TOME DE L'ARCHITECTVRE (Paris: Frederic Morel, 1567), Munich, Bayerische Staatsbibliothek München, Res/2 A.civ. 111 k, fol. 6<sup>r</sup>: "Et si par fortune ils demandoient à quelques vns l'aduis de leur deliberation & entreprinse, c'estoit à vn maistre Maçon, ou à vn maistre Charpentier, cóme l'on a accoustumé de faire, ou bié à quelque Peintre, quelque Notaire, & autres qui se disent fort habiles, & le plus souuent n'ont gueres meilluer iudgement & cóseil que ceux qui le leur demandent." Translation from Wilkinson, "The New Professionalism in the Renaissance," 124–160, here 125. © 1977 by Oxford University Press, Inc. Reproduced with permission of The Licensor through PLSclear.
- 30. Vogtherr, Kunstbüchlin, sig. Aii<sup>v</sup>: "[...] frembden vnd schweresten stück, so gmeinlich vil fantisierens, vñ nachdenckens haben wellen [...] die hoch verstendigen fisierlichen Künstler dardurch ermundert vnd ermanet werden, noch vil höher und subtiler Künsten [...] an tag zů bringen, damit die Kunst widerumb inn ein vffgang, vnd zů seinen rechten würden uñ ehren kome, vñ wir vns andern nationen befleyssen für zů schreyten."
- 31. I have also addressed this aspect of Dietterlin's career in Petcu, "Wendel Dietterlin & l'Architectura," 203.
- 32. See, for instance, Liliane Châtelet-Lange, "Le Bruderhof à Strasbourg, Citè des Chanoines," in "Hommage à Victor Beyer," special issue, Bulletin de la Cathédrale de Strasbourg 24 (2000): 175–196, here 193. I have been able to examine a photocopy of the related receipt, transcribed in Châtelet-Lange, "Le Bruderhof," 193, under Strasbourg, AVES, Série 8, Box 197 (43), pp. 49–50.
- 33. Strasbourg, AVES, Série 2 R, Box 13 (Ancienne Côte 293), Protocols of the Council of XV, October 5, 1583, fols. 84<sup>r-v</sup>, here fol. 84<sup>v</sup>: "M. Wendling sey nicht hie und mahl zu Hagenaw [...]". The entire record of the episode is transcribed in Ohnesorge, Wendel Dietterlin, 9–10; I have confirmed my transcription with reference to ibid., 10. The record is additionally transcribed, with some variations, in Rott, Quellen 1, 240–241.
- 34. Unidentified archival note transcribed in Adolph Seyboth, Das Alte Strassburg vom 13. Jahrhundert bis zum Jahre 1870. Geschichtliche Topographie nach den Urkunden und Chroniken (Strasbourg: J. H. Ed. Heitz [Heitz & Mündel], 1890), 235: "Wendling Dieterlin des Malers Haus auf dem Stephansplon, zwischen einem Brotbeck und Gall Hecklin dem Küffer, hinten auf ein Haus des Chors Hoher Stift stossend, 1585." / "Wendel Dietterlin

the painter's house on St. Stephen's square, between the bakery and Gall Hecklin the barrel-maker, adjacent at the rear to a house of the choir of the High Monastery, 1585."

- 35. Unidentified archival note transcribed in Seyboth, Das Alte Strassburg, 226: "Wendling Dietterlin, Maler, gegen den Wilhelmern über, der Garten stosset hinten auf das Badestubgesselin (v. Wolfsgässchen) 1585, 1587." / "Wendel Dietterlin, the painter, across from the Wilhelmines, whose garden adjoins at the rear the Bath Alley and the Wolf Alley, 1585, 1587."
- 36. Strasbourg, AVES, Série I R, Box 66, Protocols of the Council of XXI [hereafter Protocols XXI], June 18, 1589, fol. 317<sup>r</sup>: "Bemelter Wendling Dietherlin ubergibt noch ein supplication wegen des Newen bauws, so er aus bevelch der verordneten hern ohn verding gemalt. Und nachgehends ein verzeichnus seiner arbeit übergeben [...]." / "Wendel Dietterlin presents another supplication with regard to the New Building, which he has not yet completed according to the orders of the representative men, and thereafter submits a report of his work." I have confirmed my transcription of the original text with reference to Rott, Quellen I, 236.
- 37. On the iconography of Nemesis, see David M. Greene, "The Identity of the Emblematic Nemesis," *Studies in the Renaissance* 10 (1963): 25–43.
- 38. On the Vitruvian proportions of Dürer's Nemesis, see, for instance, Erwin Panofsky, "Virgo & Victrix: A Note on Dürer's Nemesis," in Prints: Thirteen Illustrated Essays on the Art of the Print, Selected for the Print Council of America by Carl Zigrosser, ed. Carl Zigrosser (New York, Chicago, and San Francisco: Holt, Reinhardt, and Winston, 1962), 13–38, here 15.
- 39. On the predominance of artists among Straßburg printers, see Miriam Usher Chrisman, *Lay Culture, Learned Culture: Books and Social Change in Strasbourg, 1480–1599* (New Haven and London: Yale University Press, 1982), here 13.
- 40. The entire exchange, archived as Strasbourg, AVES, Série III, ancien G.U.P., Cod. 11, fasc. 10, is transcribed in Wilhelm Stieda, "Zur Geschichte des Straßburger Buchdrucks und Buchhandels," *Archiv für Geschichte des deutschen Buchhandels* 5 (1880): 1–145, specifically 96–106; here as transcribed from the entry for June 9, 1572, in ibid., 104: "[...] fürgehalten wie das er den buchtruckern in ir handtierung greife [...]."
- 41. Kenneth F. Thibodeau, "Science and the Reformation: The Case of Strasbourg," *The Sixteenth Century Journal* 7, no. 1 (April 1976): 35–50, here 38.
- 42. Chrisman, Lay Culture, Learned Culture, 182.
- 43. Helisaeus Röslin, THEORIA NOVA COELESTIVM METEΩPΩN [...] (Straßburg: Bernhard Jobin, 1578), Madrid, Biblioteca Nacional de España, GMm/344(6), last consulted October 24, 2023, http://bdh-rd.bne.es/viewer.vm?id=000000487.
- 44. Specklin, Architectura.
- 45. For instance, ibid., Strasbourg, Bibliothèque nationale et universitaire de Strasbourg, R.12.
- 46. Specklin, *Architectura*, Wolfenbüttel, Herzog August Bibliothek, H: N 180.2° Helmst. (1). On the fortification, see Heuer, *The City Rehearsed*, 145.
- Jobin's broadsides are cataloged in Bruno Weber, "Die Welt begeret allezeit Wunder'. Versuch einer Bibliographie der Einblattdrucke von Bernhard Jobin in Strassburg," *Gutenberg-Jahrbuch* 51 (1976): 270–290.
- On the image as a historical document, see Petcu, "Vasari in Renaissance Straßburg," 261–263.
- 49. Johann Fischart, Von Straßburg, der Uhralten Statt [...], devised 1566, printed 1574–1575 or later, Strasbourg, Musées de la Ville, Cabinet des Estampes et des Dessins de Strasbourg, Inv. 77.2010.0.342: "In seiner höh hat er Werckschuh Fünff hundert sibentzig und vier, Ist durchsightig nach aller zier / ist zsamen gesetzt von Stein und Metall [...] Drumb hat der gelehrte Mann Solin [...] Unter die Wunderwerck der Welt / auch disien schönen Thurn gestellt."

- On the design as evidence of Straßburg's artistic accomplishments, see also Petcu, "Vasari 50. in Renaissance Straßburg," 262.
- Wendel Dietterlin, ARCHITECTVRA De quinq Columnarum Simmetrica distributione et 51. variis eorundem ornamentis. Liber I [hereafter Liber I] (Straßburg: Bernhard Jobin's heirs, 1593), Wolfenbüttel, Herzog August Bibliothek, A: 13 Geom. 2°; Dietterlin, Second Book; Wendel Dietterlin, ARCHITECTVRA de Postium seu Portalium ornatu vario. LIBER II [hereafter Liber II (1595)] (Straßburg: Bernhard Jobin's heirs, 1595), New York, Avery Architectural and Fine Arts Library, Columbia University, AA 557 D56; Wendel Dietterlin, ARCHITECTVRA de Postium seu Portalium ornatu uario LIBER п [hereafter Liber п (1594)] (Straßburg: Bernhard Jobin's heirs?, 1594), Nuremberg, Germanisches Nationalmuseum, LGA Gew Mus. 3391. The likelihood that this last edition was also published by Jobin's heirs arises from the fact that it would have been unusual for Dietterlin to switch publishers between the 1593 Liber I and the 1595 Liber II. I have also discussed this publication history in Petcu, "Wendel Dietterlin & l'Architectura," 204.
- 52. Fritsche Closener, Chronik, 1362, fol. 54ª: "Do man zalt 1347 jor, do wart unserre Frowen huß in dem Froenhofe gemaht." / "As one counts, in the year 1347, our Frauenhaus was erected in the Frauenhof." As recorded in Karl Hegel, ed., Die Chroniken der oberrheinischen Städte. Straßburg. Erster Band. (Leipzig: Verlag von S. Hirzel, 1870), 133.
- 53. See Barbara Schock-Werner, "Œuvre Notre-Dame, histoire et organisation de la fabrique de la cathédrale de Strasbourg," in Les bâtisseurs des cathédrales gothiques, ed. Roland Recht, exhibition catalog (Strasbourg: Éditions Les Musées de la Ville de Strasbourg, 1989), 133-138.
- See Liliane Châtelet-Lange, "L'Œuvre Notre-Dame sous le signe de Mars. Architecture, 54. distribution et décor aux XVe et XVIe siècle, à la mémoire de Francois Joseph Fuchs," Bulletin de la Cathèdrale de Strasbourg 30, no. 1 (2012): 63-102, here 76. I have also described the history and decoration of this interior in Elizabeth J. Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre' de la maison de l'Œuvre Notre-Dame et son décor peint," in Strasbourg 1560-1600. Le renouveau des arts, ed. Cécile Dupeux and Jean-David Huhardeaux Touchais (Strasbourg: Éditions des Musées de Strasbourg, 2024), 105-118.
- Scholars debate the Hall's functions. For the argument that it was a meeting place for the 55. Lodge, see Barbara Gatineau, "Salle de réunion des tailleurs de pierre de la cathédrale dite de la Loge," in Musée de l'Œuvre Notre-Dame. Arts du Moyen Âge et de la Renaissance, ed. Lize Braat and Cécile Dupeux (Strasbourg: Éditions des Musées de Strasbourg, 2013), 178. For the thesis that it was used for the Lodge's representational purposes, see Hans Haug, Musée de l'Œuvre Notre-Dame (Strasbourg) (Strasbourg: Ed. de la vie en Alsace, 1931), 11–13. For the theory that the room operated as a meeting place for all craftsmen involved in the Cathedral and as place of summer leisure, see Châtelet-Lange, "L'Œuvre Notre-Dame sous le signe de Mars," 79-80.
- 56. See also Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre."
- On the relationships between the Straßburg Cathedral and its masonic brotherhood in the 57. era before Dietterlin, see Barbara Schock-Werner, Das Strassburger Münster im 15. Jahrhundert. Stilistische Entwicklung und Hüttenorganisation eines Bürger-Doms (Kiel: Kleikamp, 1983).
- See, for example, Paul Frankl, The Gothic: Literary Sources and Interpretations through Eight 58. Centuries (Princeton, NJ: Princeton University Press, 1960), 114.
- A useful overview of the organization of masons' professional ranks in the German-59. speaking lands occurs in ibid., 130.
- 60. A version of the Ordinance is transcribed in Günther Binding with Gabriele Annas, Bettina Jost, and Anne Schunicht, Baubetrieb im Mittelalter (Darmstadt: Wissenschaftliche Buchgesellschaft, 1993), 110-120.

- 61. Herbert Ricken, *Der Architekt. Geschichte eines Berufs* (Berlin: Henschelverlag Kunst und Gesellschaft, 1977), 38–39.
- 62. See, for example, Barbara Schock-Werner, "Bauhütte und Zunft," in Die Parler und der Schöne Stil 1350–1400. Europäische Kunst unter den Luxemburgern. Ein Handbuch zur Austellung des Schnütgen-Museums in der Kunsthalle Köln, ed. Anton Legner, exhibition catalog (Cologne: Museen der Stadt Köln, 1978), 3:64–65, here 64.
- 63. See Ferdinand Janner, *Die Bauhütten des deutschen Mittlealters* (Leipzig: E. A. Seeman, 1876), 51–52.
- 64. See, for instance, Paul Frankl, "The Secret of the Mediaeval Masons"; with Erwin Panofsky, "An Explanation of Stronaloco's Formula," *The Art Bulletin* 27, no. 1 (March 1945): 46–60, here 46–47.
- Hans Schmuttermayer, [Fialenbüchlein] Durch die gnade des almechtigen gots vmb das 65. gebete vil erberger personen zupesserüg vnd zyrungē den gepewen der [...] kirchen [...] (hereafter [Fialenbüchlein]) (Nuremberg: Georg Stuchs, c. 1489), Nuremberg, Germanisches Nationalmuseum, Inc. 8° 36045, last consulted October 25, 2023, h ttps://dlib.gnm.de/item/8Inc36045/7; Matthäus Roriczer, D[as] puechle[n] d[er] fialē [n] gerechtikait (Regensburg: Matthäus Roriczer, 1486), Regensburg, Staatliche Bibliothek Regensburg, 999 IP/4Inc.238, last consulted October 25, 2023, https://mdz-nbn-resolv ing.de/urn:nbn:de:bvb:12-bsb00113020-0; Matthäus Roriczer, Geometria deutsch (Regensburg: Matthäus Roriczer, c. 1486–1490), Würzburg, Universitätsbibliothek Würzburg, I.t.q. xxxx [I have only been able to consult the second edition, Matthäus Roriczer, Geometria deutsch (Nuremberg: Peter Wagner, c. 1497), Munich, Bayerische Staatsbibliothek München, 4 Inc.s.a. 857]; Matthäus Roriczer, Wimpergbüchlein (Regensburg: Matthäus Roriczer, c. 1486–1490), Regensburg, Staatliche Bibliothek Regensburg, 999 IP/4Inc.238, last consulted October 25, 2023, https://mdznbn-resolving.de/urn:nbn:de:bvb:12-bsb00113020-0. On the chronology of the texts, see Lon Shelby, Gothic Design Techniques: The Fifteenth-Century Design Booklets of Mathes Roriczer and Hanns Schmuttermayer (Carbondale and Edwardsville, IL: Southern Illinois University Press, 1977), 38.
- 66. Shelby, Gothic Design Techniques, 61–79.
- 67. Hubertus Günther, "Die Fialenbüchlein der Spätgotik," in *Deutsche Architekturtheorie zwischen Gotik und Renaissance*, ed. Hubertus Günther (Darmstadt: Wissenschaftliche Buchgesellschaft, 1988), 31–48, here 31.
- 68. A remark suggestive of this proliferation of knowledge is Schmuttermayer, [Fialenbuchlein], fol. 2<sup>r</sup>: "Und hab solichs auß mir selber nit erfunden. sunder von vil andern grossen berumbtē maisteren. Als die Junckhern von Prage. Maister ruger. Niclas von Straspurgk." / "I have myself not invented such things, but rather [derived] them from many great, famous masters such as the Parlers of Prague, Master Ruger and Niklas of Straßburg."
- 69. Ryff, *Architectur*, sig. CC3<sup>r</sup>: "[...] der hochberümpt Architectus Vitruuius [...] erfordert, das der fleissig Architectus, der disen hohen namen ehrlichen füren will, in mancherley künsten vnd künstlicher arbeit der Handtwerck, erfaren und geübt sein sol."
- 70. Ibid., sig. AA3<sup>r</sup>: "[...] sindt dieser zeit vnsere gemeine Werckmeister vnd Steinmetzen solches grobs verstandts, Dieweil sie nit allein der Mathematischen, sonder aller guter künsten vnerfaren, vnd auch der Geometri vorab (darauff all ir grundt vnd fundamēt stehet) [...]."
- 71. See Petcu, "Vasari in Renaissance Straßburg," 251–282. I briefly treat the *Architectura*'s reaction to this provocation in Petcu, "Wendel Dietterlin & l'*Architectura*," 213. The Vasarian critique and Straßburg's response were first mentioned in relation to Dietterlin in Martin, "Der Maler Wendel Dietterlin," 25.
- 72. Thomas Frangenberg, "Bartoli, Giambullari and the Prefaces to Vasari's 'Lives," *Journal* of the Warburg and Courtauld Institutes 65 (2002): 244–258, here 255.
- 73. Giorgio Vasari, LE VITE DE PIV ECCELENTI ARCHITETTI, PITTORI, ET SCVLTORI ITALIANI [...] (Florence: Lorenzo Torrentino, 1550), Princeton, NJ,

Marquand Library of Art and Archaeology, N6922.V45 1550, 1:43: "[...] faceuano vna maledizzione di tabernacolini l'un sopra l'altro, có tante piramidi, & punte, & foglie, che non ch'elle possano stare, pare impossibile ch'elle si possino reggere. Et hanno piu il modo da parer fatte di carta, che di pietre o di marmi." The same passage appears in the 1568 edition: Giorgio Vasari, *LE VITE DE' PIV ECCELLENTI PITTORI, SCVLTORI, E ARCHITETTORI* [...] (Florence: i Giunti, 1568), Munich, Zentralinstitut für Kunstgeschichte, CA 254/505(1-2 R, 1:26. Translation from Petcu, "Vasari in Renaissance Straßburg," 256. First published in the *Journal of the Warburg and Courtauld Institutes*, © 2019 by The Warburg Institute. All rights reserved. https://www.journals.uchicago.edu/doi/abs/10.1086/27074377.

- 74. Petcu, "Vasari in Renaissance Straßburg," 256. On Vasari's maniera tedesca, see Markus Brandis, La maniera tedesca. Eine Studie zum historischen Verständnis der Gotik im Italien der Renaissance in Geschichtsschreibung, Kunsttheorie und Baupraxis (Weimar: VDG, Verlag und Datenbank für Geisteswissenschaft, 2002), 237–248.
- 75. See Ethan Matt Kavaler, *Renaissance Gothic: Architecture and the Arts in Northern Europe,* 1470–1540 (New Haven and London: Yale University Press, 2012), 231–257.
- 76. For the former case, see, for example, Ethan Matt Kavaler, "Architectural Wit: Playfulness and Deconstruction in the Gothic of the Sixteenth Century," in *Reading Gothic Architecture*, ed. Matthew M. Reeve (Turnhout: Brepols, 2008), 139–150; for the latter, see Hubertus Günther, "Die ersten Schritte in die Neuzeit. Gedanken zum Beginn der Renaissance nördlich der Alpen," in *Wege zur Renaissance. Beobachtungen zu den Anfängen neuzeitlicher Kunstauffassung im Rheinland und in den Nachbargebeiten*, ed. Norbert Nußbaum et al. (Cologne: SH-Verlag, 2003), 30–87, here 56–60.
- 77. The marks are identified, for instance, in Gatineau, "Salle de réunion des tailleurs de pierre de la cathédrale dite de la Loge," 178.
- 78. See, for instance, Payne, The Architectural Treatise, 155–156.
- 79. On the influence of Vitruvius and Tacitus on German humanists and vegetal forms in architecture around 1500, see, for instance, Paul Crossley, "The Return to the Forest: Natural Architecture and the German Past in the Age of Dürer," in Künstlerischer Austausch: Artistic Exchange. Akten des XXVIII. Internationalen Kongresses für Kunstgeschichte, Berlin 15–20 Juli 1992, ed. Thomas W. Gaehtgens (Berlin: Akademie Verlag, 1993), 2:71–80. On the reception of this trope in the Hall, see Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre," 108.
- 80. Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre'," 108.
- 81. Letter from Raphael to Pope Leo X, drafted by Angelo Colocci, with annotation by Raphael. Munich, Bayerische Staatsbibliothek München, Cod. It. 37b: "Pur, questa architectura hebbe qualche ragione. Però che nacque dalli arbori non anchor tagliati, delli quali, piegati li rami e rilegati insieme, fanno li lor terzi acuti. E, benchè questa origine non sia in tutto da sprezzare, pur è debile, perchè molto più reggerebbono le capanne fatte di travi incatenati, e posti a use di colonne con li colmi loro et coprimenti: come descrive Victruvio della origine dell' opera Dorica, che li terzi acuti, li quali hanno dui centri [...]." Quoted from Ingrid D. Rowland, "Raphael, Angelo Colocci, and the Genesis of the Architectural Orders," *The Art Bulletin* 76, no. 1 (March 1994): 81–104, here 101. Rowland likewise addresses the versions of the letter and the collaborations that gave rise to them.
- 82. See also, for instance, my discussion of this challenge in Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre'," 111.
- See Anne Wolff, "Les peintures de la salle de la loge de la Cathédrale de Strasbourg," (master's thesis, Université Marc-Bloch, 2006), chap. 4, pp. 14 and 18.
- The aquarelles can be consulted in Strasbourg, Médiathèque André Malraux, under inventory numbers MS. 970–MS. 981.

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- 85. See, for instance, Wolff, "Les peintures de la salle de la loge," Introduction, 3 n. 6; chap. 1, pp. 22–26; Cf. Ohnesorge, who regarded the grotesques as too delicate for Dietterlin's hand: Ohnesorge, *Wendel Dietterlin*, 54; and Pirr, Die *Architectura*, 14.
- 86. Châtelet-Lange, "L'Œuvre Notre-Dame sous le signe de Mars," 91.
- 87. The original transcription which I have not been able to consult is Léon Dacheaux, ed., *Fragments des anciennes chroniques d'Alsace IX: Diverses chroniques* (Strasbourg: Imprimerie Strasbourgeoise, R. Schutlz & Cie, 1901), n. 4255. The fragment is identified in Wolff, "Les peintures de la salle de la loge," chap. 1, p. 27. On the identity of the space mentioned in the fragment, see, variously, Châtelet-Lange, "L'Œuvre Notre-Dame sous le signe de Mars," 88; and Wolff, "Les peintures de la salle de la loge," chap. 1, pp. 26–28.
- 88. Châtelet-Lange, "L'Œuvre Notre-Dame sous le signe de Mars," 88.
- 89. Ibid., 90; and Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre'," 111.
- 90. These include Veelderleij Veranderinghe van grotissen ende Compertimenten ... Libro Primo (1556) and Veelderleij niewe inuentien van antijcksche sepultueren [...] Libro Secundo (1557), cataloged in Friedrich W. H. Hollstein, Dutch and Flemish Etchings Engravings and Woodcuts ca. 1450–1700, vol. vI, Douffet-Floris (Amsterdam: Menno Hertzberger, 1952), 250, nos. 14–41.
- 91. For instance, Vredeman's PARERGA series, cataloged in Friedrich W. H. Hollstein, Hollstein's Dutch & Flemish Etchings, Engravings and Woodcuts 1450–1700, vol. XLVII, Vredeman de Vries, part I, 1555–1571, compiled by Peter Fuhring, ed. Ger Luitjen (Rotterdam: Sound & Vision Interactive in Cooperation with the Rijksprentenkabinet, Rijksmuseum Amsterdam, 1997), 109–118, nos. 101–120.
- 92. Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre'," 111. Châtelet-Lange also identifies pl. 54 of Dietterlin's *First Book* as a comparable example. See "L'Œuvre Notre-Dame sous le signe de Mars," 88–89.
- 93. See Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre," 111.
- 94. I first explored the relationship between the following *De architectura* passages and Dietterlin's artistic production in Petcu, "Amorphous Ornament," 33.
- 95. Vitruvius, *De architectura* 7.5.3: "Pro columnis enim struuntur calami striati cum crispis foliis et volutis, pro fastigiis appagineculi, item candelabra aedicularum sustinentia figuras, supra fastigia eorum surgentes ex radicibus cum volutis teneri flores habentes in se sine ratione sedentia sigilla, non minus coliculi dimidiata habentes sigilla alia humanis, alia bestiarum capitibus." Translation from Vitruvius, Rowland, and Howe, *Ten Books on Architecture*, 91. © Cambridge University Press 1999. Reproduced with permission of The Licensor through PLSclear.
- 96. I first probed this dynamic in Petcu, "Amorphous Ornament," 33.
- 97. Vitruvius, *De architectura* 7.5.4: "Quemadmodum enim potest calamus vere sustenire tectum aut candelabrum ornamenta fastigii, seu coliculus tam tenuis et mollis sustinere sedens sigillum [...]". Translation from Vitruvius, Rowland, and Howe, *Ten Books on Architecture*, 91. © Cambridge University Press 1999. Reproduced with permission of The Licensor through PLSclear.
- 98. Vitruvius, De architectura 7.5.4: "Haec autem nec sunt nec fieri possunt nec fuerunt." Translation from Vitruvius, Rowland and Howe, Ten Books on Architecture, 91. C Cambridge University Press 1999. Reproduced with permission of The Licensor through PLSclear.
- 99. Payne, The Architectural Treatise, 155–157.
- 100. The canonical account of grotesques and their stylistic development in Dietterlin's milieu remains Carsten-Peter Warncke, *Die Ornamentale Groteske in Deutschland, 1500–1600, 2* vols. (Berlin: Verlag Volker Spies, 1979).
- 101. I develop this argument further in Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre," 111–114. On the Hall's mixture of native and exotic species, see also Wolff, *Les peintures de la salle de la loge*, ch. 4, pp. 20–21.

- 102. The specimens are pictured, respectively, in the collated edition of the completed treatise: Otto Brunfels, *HERBARVM VIVÆ EICONES ad naturæ imitationem* [...] [hereafter *Herbarum vivae eicones*] (Straßburg: Johann Schott, 1532–1536), Edinburgh, University of Edinburgh Main Library, Special Collections, JY.182, 1:36; 1:71; 11:47. On the cycle's engagement with *Herbarum vivae eicones*, see also Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre," 112–114.
- Hieronymus Bock, New Kreütter Buch von vnderscheydt, würckung vnd namen der 103. kreütter so in Teütschen lande wachsen. Auch der selbigen eygentlichem vnd wolgegründtem gebrauch in der Artznei, zu behalten vnd zu fürdern leibs gesuntheyt fast nutz vnd tröstlichen, vorab gemeynem verstand. Wie das auß dreien Registern hienach verzeychnet ordenlich züfinden. (Straßburg: Wendel Rihel, 1539), Strasbourg, Bibliothèque nationale et universitaire de Strasbourg, R10502, last consulted October 26, 2023, www .numistral.fr/ark:/12148/bpt6k9415058t; Leonhart Fuchs, DE **HISTORIA** STIRPIVM COMMENTARII INSIGNES, MAXIMIS IMPENSIS ET VIGILIIS ELABORATI, ADIECTIS EARVNDEM VIVIS PLVSQVAM quingentis imaginibus, nunquam antea ad naturæ imitationem artificiosius effictis & expressis [hereafter De historia stirpium] (Basel: Michael Isingrin, 1542), Munich, Bayerische Staatsbibliothek München, Rar. 2036. On the possible influence of Bock's New Herbal upon the frescoes, see Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre," 112-114.
- 104. On Kandel's involvement in Bock's *New Herbal*, see Brian W. Ogilvie, *The Science of Describing*, 145.
- 105. Pliny the Elder, Naturalis historia, 35, 65.1-66.2.
- The story occurs, for instance, in Cicero, *De inventione*, 2.1.1–2.1.3 as well as Pliny, *Naturalis historia*, 35.64.
- 107. On the significance of these stories for premodern northern European art, see, for instance, Heuer, *The City Rehearsed*, 6. I have also related icastic and fantastic composition, and the Zeuxis myth, to Renaissance architecture in Petcu, "Joseph Boillot," 57 and 61, respectively.
- Erwin Panofsky, Idea. Ein Beitrag zur Begriffsgeschichte der älteren Kunsttheorie, 2nd ed. (Berlin: Bruno Hessling, 1960), 24–25.
- 109. Petcu, "La 'salle de la Loge des maçons et tailleurs de pierre," 111.
- 110. Ibid., 110.
- 111. On the New Lusthaus, see Ulrike Weber-Karge, "... einem irdischen Paradeiβ zu vergleichen ... ". Das Neue Lusthaus in Stuttgart. Untersuchungen zu einer Bauaufgabe der deutschen Renaissance (Sigmaringen: Jan Thorbecke Verlag, 1989).
- 112. I first analyzed this program in Elizabeth J. Petcu, "'A particularly artful *artificio*': Staging Wonder in the Great Hall of Stuttgart's New Lusthaus," in *Central European and American Perspectives on Visual Arts in Early Modern Europe*, ed. Ondřej Jakubec (Brno: Barrister & Principal Press and Masaryk University Press, 2013), 57–73. On the ceiling architecture, see ibid. 60–61.
- 113. For this initial suggestion, see Werner Fleischhauer, "Die Malereien im Stuttgarter Lusthaus," in Württembergische Vergangenheit. Festschrift des Württ. Geschichtsu. Altertumsvereins zur Stuttgarter Tagung des Gesamtvereins der deutschen Geschichts- und Altertumsvereine im September 1932 (Stuttgart: Kohlhammer, 1932), 305–333, here 311–313.
- 114. Stuttgart, Hauptsaatsarchiv Stuttgart [hereafter HS], Hofsachen, A20 Bü37a, Acta und Hanndlungen des Maalwercks des newen Lussthaus Baws, 1587–1592 [hereafter AHMLB], Letter from Georg Gadner to Duke Ludwig, August 6, 1587, fol. 147c<sup>T</sup>.: "[...] so were wider der maler Künst Landschaften sonderlich aus der perspectif, in die hohe zu malen, das sie von unden auff gesehen worden müssten. Sondern in ain solche Decke fügten sich schwebende Bilder, Gewülcke und was fliegt [...]." I have confirmed my transcription of the original text with reference to Fleishhauer, "Die Malereien im Stuttgarter Lusthaus," 313. I first addressed Gadner's stipulation and Dietterlin's reaction in Petcu, "'A particularly artful artificio,"" 64–65.

- 115. On perspective-pictorial interiors, see, for instance, Ingrid Sjöström, *Quadratura: Studies in Italian Ceiling Painting* (Stockholm: Almqvist & Wiskell International, 1978), 19–21.
- 116. See, for example, Fleischhauer, "Die Malereien im Stuttgarter Lusthaus," 317–318.
- 117. On the transformation in plans and Dietterlin's contributions to the Great Hall, see, for instance, Ohnesorge, *Wendel Dietterlin*, 15–21.
- 118. Stuttgart, HS, Hofsachen, A20 Bü37a, AHMLB, Letter from Georg Gadner to Duke Ludwig, July 1590, fol. 141<sup>r</sup>: "[...] I. Die fürschaffung der welt, 2. Das lamm Gottes. 3. Das jüngst Gericht[.]"
- 119. See, most recently, Peter Prange, Deutsche Zeichnungen 1450–1800. Zeichnungen aus dem Kupferstichkabinett der Hamburger Kunsthalle, 2 vols. (Cologne, Weimar, and Vienna: Böhlau, 2007), 1:139–141.
- 120. On the drawing, see, for instance, Petcu, "A particularly artful artificio," 61-62, 65.
- 121. Heinrich Geissler, "Das Jüngste Gericht," in Deutsche Zeichnungen vom Mittelalter bis zum Barock., ed. Hans-Martin Kaulbach, with contributions by Guido Messling and text by Heinrich Geissler (Ostfildern: Hatje Cantz Verlag, 2007), 99–100, here, 99.
- 122. On this unity in Dietterlin's design, see Petcu, "A particularly artful artificio," 61–62.
- 123. Stuttgart, HS, Hofsachen, A20 Bü37a, AHMLB, Notice from Georg Gadner, March 22, 1592, fol. 53<sup>r</sup>: "seÿ es Ime ungelegen, mit jenen, wölche im an der Kunst und Arbeit ungleich, in gleichem Gewinne anzuliegen. Zu dem wölle er mit dem Hofmaler nichts zu schaffen haben[.]" I have confirmed my transcription of the original text with reference to Ohnesorge, Wendel Dietterlin, 20.
- 124. Ohnesorge, Wendel Dietterlin, 20.
- 125. On the figure of the Kunstintendant, see Martin Warnke, The Court Artist: On the Ancestry of the Modern Artist, trans. David McLintock (Cambridge: Cambridge University Press, 1993), 175–187.
- 126. See Susan Maxwell, *The Court Art of Friedrich Sustris: Patronage in Late Renaissance Bavaria* (Abingdon and New York: Ashgate, 2011), 43; 110.
- 127. Here I paraphrase Wilhelm V, Duke of Bavaria as quoted in Karl Feuchtmayr, "Friedrich Sustris," in Allgemeines Lexikon der bildenden Künstler von der Antike bis zur Gegenwart. Unveränd. Nachdr. Der Original-Ausgabe Leipzig 1937 und 1938, ed. Ulrich Thieme, Felix Becker, and Hans Vollmer, vol. 32 (Leipzig: W. Engelmann, 1992), 306–313, here 307: "[...] hinfüran wie bisher Rechter und Obrister Paumaister haißen auch sein vnnd bleiben [...] Dazu sollen Imme alle Maler, Scolptori, Stoccatori wie auch annder Vertuosi vnnd Handwerchsleuth gehorsamb sein und Ir Jeder sein arbeit nach seinem bevelch, angeben und heißen verrichten und machen."
- 128. Petcu, "A particularly artful artificio," 65-66.
- 129. Ibid., 61.
- 130. Ibid., 66.
- 131. Weber-Karge, "... einem irdischen Paradeiβ zu vergleichen ..., " 73; and Petcu, "A particularly artful artificio," 58; 65.
- 132. See Petcu, "A particularly artful artificio.""
- 133. On Dietterlin's friendship with Schickhardt, see Ohnesorge, *Wendel Dietterlin*, 23–24. I have also considered the impact of Schickhardt's friendship with Dietterlin in Petcu, "Wendel Dietterlin & l'*Architectura*," 203.
- 134. See, for instance, the essays in Lorenz Sönke and Wilfried Setzler, eds., Heinrich Schickhardt: Baumeister der Renaissance. Leben und Werk des Architekten, Ingenieurs und Städteplaners. Katalog zur Wanderaustellung des Hauptstaatsarchivs Stuttgart (Leinfelder-Echterdingen: DRW-Verlag, 1999).
- 135. Heinrich Schickhardt, "Verzachnus Mein Heinrich Schickhardts-Bücher, ANNO 1631 [hereafter "Verzachnus"]," in Schickhardt, INVENTARIUVM, VNND. Verzachnus Was Der Barmhetzig Gott Dürch Seinem W
  ültreichen Segen, Mier Heinrich Schickhardt Vnnd Meiner lieben Haüsfraw Zu ligenton gietlein, Vnnd fahrnüs Bescheret hatt, Darüm mit Ihme Von Hertzen Lob Ihr preiß Vnnd Danckh Sagen: Das gleichen Sollen dürch unsere Nachkomen thüon.

1630., 1630–1632, Stuttgart, Württembergische Landesbibliothek, Cod.hist.fol.562., fol. 130<sup>r</sup> (p. 267): "[...] Wendel Dieterlein von Strasbürg mainem lieben und güten freund." A modern edition of the manuscript in which Schickhardt's library inventory appears is Heinrich Schickhardt, *Inventarium 1630–1632*. *Inventar der Güter und der Werke eines Architekten der Renaissance / L'inventaire des biens er des oeuvres d'un architecte de la Renaissance*, ed. André Bouvard, with Denise Rietsch (Karlsruhe: Braun Verlag, 2013).

- 136. Petcu, "Wendel Dietterlin & l'Architectura," 203. For an analysis of Schickhardt's library, see Roman Janssen, "Heinrich Schickhardt im Spiegel seines Buchbesitzes," in Neue Forschungen zu Heinrich Schickhardt. Beiträge einer Tagung des Württembergischen Geschichtsund Altertumsvereins und des Hauptstaatsarchivs Stuttgart am Samstag, dem 15. Januar 2000 im Hauptstaatsarchiv Stuttgart, ed. Robert Kretzschmar (Stuttgart: W. Kohlhammer Verlag, 2002), 7–49.
- 137. Heinrich Schickhardt, "Verzachnus," fol. 129<sup>r</sup>: "ARCHITECTVR, IST die mit vil andern herlichen Künsten gezieret ist."
- 138. Jacopo Barozzi da Vignola, LE DVE REGOLE DELLA PROSPETTIVA PRATICA (Rome: Francesco Zannetti, 1583), London, The Wellcome Library, USTC 807538, last consulted October 26, 2023, www.proquest.com/books/le-due-regole-della-prospettivapratica-di-iacomo/docview/2090366835/se-2?accountid=10673. The treatise is referenced in Schickhardt, "Verzachnus," fol. 128<sup>r</sup>: "Noch ein Itallianisch Büch von der perspetif, dürch Iacomo Barozzi. getrücket Roma anno 1582 [sic]."
- 139. Sebastiano Serlio, REGOLE GENERALI DI ARCHITETVRA SOPRA LE CINQVE MANIERE DE GLIEDIFICI, CIOE, THOSCANO, DORICO, IONICO, CORINTHIO, ET COMPOSITO, CON GLIESSEMPI DELL'ANTIQVITA, CHE, PER LA MAGIOR PARTE CONCORDANO CON LA DOTTRINA DI VITRVVIO. [hereafter Quarto Libro] (Venice: Francesco Marcolini Da Forlì, 1537), Princeton, NJ, Princeton University, Marquand Library of Art and Archaeology, NA2510.551q Oversize; referenced in Schickhardt, "Verzachnus," fol. 129<sup>r</sup>: "4. Noch ein Büch von Sebastian Serlin mit No. 4. bezaichnet."
- 140. Petcu, "Wendel Dietterlin & l'Architectura," 203.