



# Typically Viennese? On the Production and Design of Opera Scores Written by Professional Copyists in Mid-Eighteenth-Century Vienna

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**Abstract:** This study investigates the production and material characteristics of opera scores created by professional copyists and bookbinders in mid-eighteenth-century Vienna, drawing on an extensive analysis of over 160 manuscripts from Habsburg collections. It explores the identification of scribes' hands, the selection of paper, and the operational structures of independent workshops that emerged around 1760, marking a pivotal shift in the organization of music manuscript production.

The paper emphasizes the codicological features of the scores, including binding styles, paper types, and staff ruling, while also exploring the influence of notable figures like Theresia Ziss (1700–1777), the widow of Viennese court copyist Andreas Ziss (c.1692–1755), on the standardization of Viennese copying practices. Her copyist workshop is highlighted for its significant contribution to the aesthetic and functional qualities of the manuscripts, showcasing a remarkably consistent writing style.

The findings on ink color, handwriting, and structural elements of the scores provide a comprehensive understanding of the material culture surrounding the production of music in mid-eighteenth-century Vienna, underscoring the intricate craftsmanship involved and its broader implications for the study of eighteenth-century music transmission.

**Keywords:** 18th century; brocade paper; copyists; Vienna; workshop; Ziss, Theresia

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Opera Scores) at the annual conference of the Gesellschaft für Musikforschung (gfm, German Musicological Society) in Berlin on October 1, 2022, and at the annual congress of the International Association of Music Libraries, Archives and Documentation Centres (IAML) in Cambridge on July 31, 2023, as part of the panel “Paper and copyists in Viennese opera scores, 1760–1775.”

Over the past ten years, the projects “Cultural Transfer of Music in Vienna, 1755–80” and “Paper and Copyists in Viennese Opera Scores, 1760–70” (in the following both referred to as Paper & Copyists) examined over 160 opera scores in 370 volumes from the Habsburg collections. These examinations focused on identifying professional copyists and the types of paper they employed. Efforts were made to determine the provenance, dating, and intended use of the opera scores through consultation of various types of sources.<sup>1</sup> Nevertheless, the scores themselves consistently remained the central focus of analysis. Most of the manuscripts lack concrete evidence to be assigned to a specific Viennese performance, such as notes about the location of the performance or the musicians involved.<sup>2</sup> Consequently, an initial visual analysis must assess whether a copy was most likely produced in Vienna. This task is undoubtedly challenging, requiring a trained eye and thus considerable expertise in source studies.

The question of whether music manuscripts produced by professional copyists in Vienna in the eighteenth century exhibit “typical” sets of characteristics also arises in other research areas, especially in the field of edition philology. It is unlikely, though, that anyone has pursued it as tenaciously as Dexter Edge in his study of W. A. Mozart’s Viennese copyists.<sup>3</sup> In the following, this question is re-examined, but instead of focusing on the last quarter of the eighteenth century as Edge did, the data analysis concentrates on the years 1760 to 1775. This was the period when independent copyists’ workshops, which didn’t belong to the official court apparatus, first emerged in Vienna. The commonalities and characteristics of the sources that were analyzed codicologically by Paper & Copyists show that relatively uniform processes of producing copies of opera scores were established in these collectives within a short period of time.

## **Format and Size**

The examined source corpora consist primarily of one-, two-, and three-volume manuscripts, with occasional examples extending to five volumes, all in oblong format. Most volumes contain one act of an opera, but shorter acts

are sometimes combined into a single volume. On average, the book covers of the scores measure 32 by 22 centimeters (slightly larger than A4). However, as shown in figures 1 and 2, these dimensions sometimes vary widely from a few millimeters to several centimeters in correlation with the size of the book block. Only the height of the volumes is always approximately the same, apparently to ensure an even appearance when stored upright on the shelf.



Figs. 1 and 2: A-Wn Mus.Hs.10027, vol. 1–3, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Fig. 3: A-Wn Mus.Hs.18235, vol. 2, front cover, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

## Binding

The conservation condition of the manuscript sheets is almost exclusively excellent, with issues such as ink corrosion being exceedingly rare. Visible traces of use are the exception rather than the rule. In contrast, the book covers, spines, and bindings often show significant damage due to unfavorable storage conditions, improper handling, worm infestations, or material aging.

Many bindings feature leather with gold embossing, as seen in figure 3, where the leather was dyed to create a marbled effect. More frequently, however, the book spines are covered with brocade paper, which mostly came from Augsburg in southern Germany, one of the strongholds of brocade paper production. Figures 4 and 5 include signatures of the notable Augsburg manufacturers Johann Carl Munck and Johann Wilhelm Meyer.<sup>4</sup> In the collection of Archduchess Elisabeth (1743–1808), the choice of binding material was closely tied to the type of work: Opere serie are bound in leather, whereas opere buffe and opéras comiques are bound in brocade paper.<sup>5</sup>



Fig. 4: A-Wn Mus.Hs.17817, vol. 1, front cover and signature "BEY IOHANN WILHELM MAYR N 5," by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Fig. 5: A-Wn Mus.Hs.10027, vol. 1, front cover and signature "AUGSPURG BEY IOHANN WILHELM MUNCK N. 34," by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

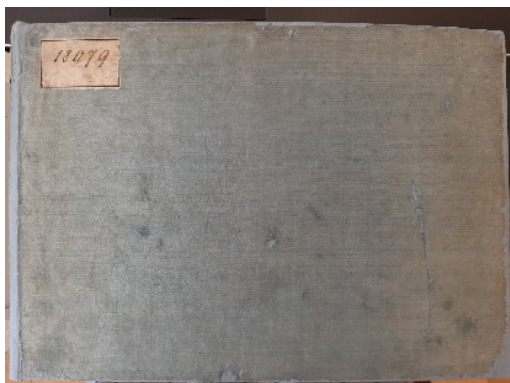


Fig. 6: A-Wn Mus.Hs.18079, silk cover, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Fig. 7: A-Wn Mus.Hs.17783, vol. 1, block-printed paper cover, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Fig. 8: A-Wn Mus.Hs.17851, vol. 1, paste paper cover, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Fig. 9: A-Wn Mus.Hs.10007, vol. 3, paste end paper and Ex Libris of Archduchess Elisabeth's collection, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Fig. 10: A-Wn Mus.Hs.17894, marbled end paper, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

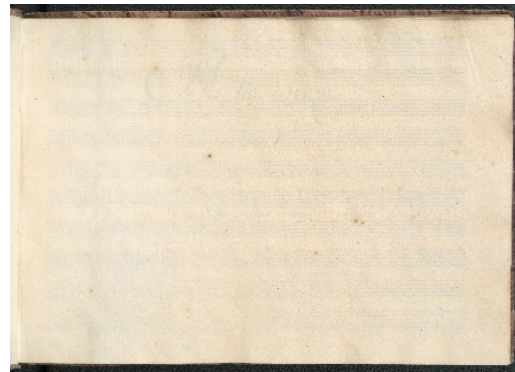
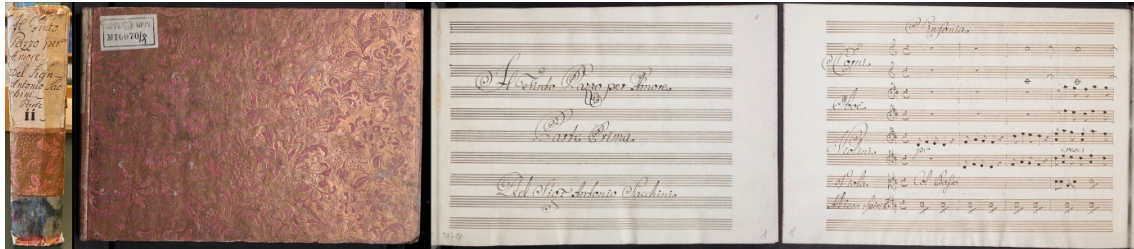


Fig. 11: A-Wn Mus.Hs.17851, vol. 3, undecorated end paper, by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

A comparison of two commonly encountered types of scores (figs. 12–14, a product of the Ziss workshop, and figs. 15–17, a score created by the workshop around the copyist with the siglum WK71F<sup>6</sup>) reveals typical features of binding inscriptions and title page design. The spines of the scores usually include a short title and an order number, whereas a title label on the front cover is often missing. The title page generally contains only the title of the stage work, occasionally supplemented by details such as the genre, the occasion, the dedicatee, or the act number. On a title page shown further below, written by Theresia Ziss (fig. 25), the composer's name is not indicated—a case that occurs surprisingly often, though it should be noted that the composer is consistently recorded on the title label on the spine. (A possible, though less likely, reason in the case of court copyist workshops is that the composer was deliberately kept unknown to the copyists in order to protect against unauthorized resale of duplicates.) The title page is frequently followed by a list of singers' roles, but performance dates can only be found in very few opera scores.

As was typical during this early phase of commercial sheet music production, none of the examined manuscripts includes the name or business address of the commissioned copyist.



Figs. 12–15: A-Wn Mus.Hs.10070, vol. 2, spine, vol. 1, front cover, title page, and first page of the score (written by Theresia Ziss), by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Figs. 16–19: A-Wn Mus.Hs.18076, vol. 1, spine, front cover, title page, and beginning of the first aria of Act I on fol. 31v (title, singers' roles, and lyrics written by an unknown copyist, the rest of the aria written by WK71E), by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

The two scribes responsible for the textual design of the scores in figures 14 and 18 are also found in several other opera manuscripts examined by Paper & Copyists. When the script analysis extends to the first pages of the scores and the textual entries visible there (e.g., instrumentation, lyrics, etc., as shown in figs. 15 and 19), two representative patterns of labor division become evident: In the score from Theresia Ziss's workshop, the lead copyist wrote both the title and the initial section of the musical text. By contrast, in the score from the WK71F workshop, one copyist handled the musical notation while another added the majority of the text entries.

## Paper and Staff Ruling

Most of the paper used for the Vienna court opera scores originated from the *Valle delle cartiere* (Valley of the Paper Mills) on the Toscolano River near Lake Garda. It was produced in a format of 64 x 46 cm, slightly larger than the later "royal"/"REAL" size.<sup>7</sup>

This relatively heavy, stiff paper was favored by professional copyists in Vienna, as it was brightly bleached, very durable, and had a smooth surface that preserved any writing cleanly and reliably.

Many of the examined papers were in use with three to eight different rulings, meaning they were lined with a varying number of staves according to need by different ruling devices. For instance, P71 appears with seven different rulings, three of them with constant and four with slightly varying line spacings, likely attributable to the stability—and occasional instability—of the ruling instruments (fig. 20). In some cases, the ruling formats of one paper varied even within a single manuscript volume. Furthermore, changes in the number of staves usually correlate with a change in paper, as figure 21 illustrates.<sup>8</sup> This suggests that the paper was not ruled at the place of its production in the paper mill nor at the place of its (first) use by music copyists but at an intermediate stage of the value chain, most likely in Venice.<sup>9</sup>

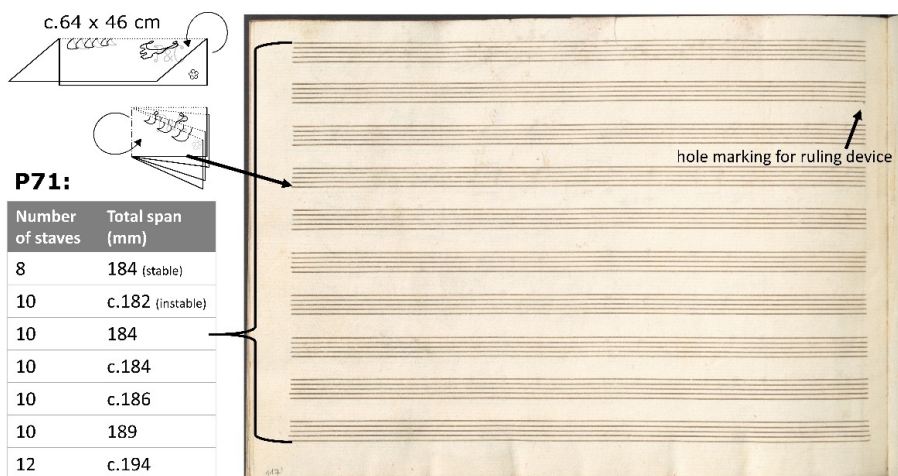


Fig. 20: A folio of P71 and its ruling formats

Volume 1 (Act I)						
Gathering	Folios per Gathering	Folio	Total Span	Watermark	Copyist	Musical Disposition
1	2	[00–0] <sup>1</sup>	8/183	<a href="#">P90</a>	<a href="#">WK68C</a>	Title page, f. 0r
2	5+6	1–12 <sup>2</sup>	10/191	<a href="#">P96</a>		Sinfonia, Mov. 1
3	8	13–18	8/183	<a href="#">P90</a>		Sinfonia, Mov. 2
4		19–26	10/191	<a href="#">P96</a>		Sinfonia, Mov. 3 (f. 19–27)
5	6	27–32	10/192	<a href="#">P54</a>	<a href="#">WK69E</a>	
6	8	33–40	10/187	<a href="#">P90</a>	<a href="#">WK69F</a>	
7		41–48				
8		49–50; 55–56				
		51–54	10/192	<a href="#">P54</a>		
9		57–64	10/187	<a href="#">P90</a>	<a href="#">WK69E</a>	

Fig. 21: Excerpt from the scoresheet of A-Wn Mus.Hs.1056 (Niccolò Piccinni, *La pescatrice*)

All scores recorded by Paper & Copyists consist primarily of ten-line music paper, with eight-line paper also being used occasionally. For musically more complex and larger-scale finales, the paper changed to twelve-line. The staves were almost exclusively inscribed by machine with ten- and twelve-line ruling devices<sup>10</sup> and only occasionally by hand with simple five-line, four-line, or two-line rastra. The beginning of the staff lines, where the ruling pens first touched the paper, is often marked with small puncture holes (as in the upper right corner of fig. 20), but never with vertical orientation lines or blind folds, as is sometimes customary in opera scores of other origins.<sup>11</sup>

It is unclear what type of ruling machine was used to produce the ten- and twelve-line music paper, especially as no such apparatus is likely to have survived in Vienna or Italy.<sup>12</sup> The only detailed study to date on the devices used for producing music paper in the eighteenth century identifies two main principles of machine-based lining: an “English method,” where a roller passes the paper underneath self-filling brass pens (the apparatus patented by John Tetlow in 1770 with revolving wheels instead of pens, over which the paper is drawn, is likely already an advancement of this system), and a “French system” described by A. B. Méguin in 1828, where the paper remains clamped in a frame while pens are pulled over it. According to Méguin, a procedure comparable to the one described by him was applied in Germany and Italy.<sup>13</sup>

It is difficult to judge which ruling machine was used for lining the paper used in Vienna solely on the basis of the paper findings. However, as the staff lines of the left and right halves of the bifolios in most of the analyzed scores run at the same height, it can be assumed that the production process for ruling the papers sold in Vienna was similar to the aforementioned methods.<sup>14</sup>

## **Layer Arrangement and Book Block Treatment**

The bifolios in the studied scores are mostly compiled into bundles of eight folios, formed by placing four bifolios inside one another. Transitions to finales, with a switch to twelve-line paper, usually occur seamlessly, meaning that no pages are left completely or partially empty. Also, it is rather rare for several blank pages to remain at the end of a score, or for individual folios to be cut out or added later. This indicates that the copyists planned the required space with great precision.

The gatherings of a volume were numbered consecutively by the copyists in the upper left corner of each first page. This kind of marking, commonly used since the Middle Ages and referred to as a “custos,” was intended to ensure the correct binding order.<sup>15</sup> The completed music sheets were passed on to a bookbinder, either immediately after the manuscript’s creation or at a later time. There, the gatherings were stitched together with a thread, pressed, and glued to the spine, which was often then rounded and backed. A trimming plane called the “book plough” was used to produce a clean cut so that the score could be easily leafed through and the trimmed book block decorated (see figs. 22 and 23, as well as fig. 2 with the example of a red-speckled book edge).



Fig. 22: A bookbinder's workshop, woodcut by J. Amman (from Hans Sachs / Jost Amman, *Eygentliche Beschreibung Aller Stände auff Erden...*, Frankfurt am Main 1568, unpag.)

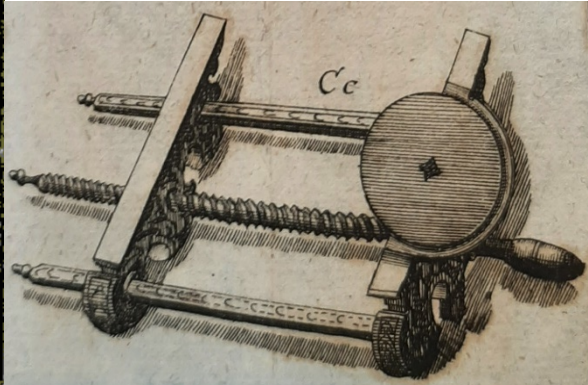


Fig. 23: "Schnitthobel" or book plough (from Johann-Gottfried II Zeidler, *Buchbinder-Philosophie oder Einleitung in die Buchbinder-Kunst*, Hall im Magdeburgischen 1708, p. 83)

The original deckle edge of the paper was removed during the trimming process at the latest, so the half-sheet was shortened by 0.5 to 1.5 centimeters on each side.<sup>16</sup> Additionally, the book binder also planed off a few millimeters along the head edge, where the entire sheet of paper was originally cut or torn into two bifolios.<sup>17</sup> This process explains why the watermarks are incomplete in the sheets of paper reconstructed by Paper & Copyists.<sup>18</sup>

## Musical Text and Other Entries—Typically Viennese?

The most interesting and informative subject of investigation in the search for a Viennese style of commercial music copying is, of course, the musical text. In this regard, the Mozart expert Dexter Edge noted a distinctive feature of Viennese music manuscripts: the light, mostly brownish to yellowish color of the ink. Edge does not view this as a consciously chosen design feature, but rather as a result of "discoloration"<sup>19</sup> caused by the aging of local recipes for iron gall ink. Instead, he highlights the variety of ink colors that he found, for example in the opera scores of Wenzel Sukowaty's workshop.

A wide range of ink colors is also evident in the opera scores kept in the Habsburg collections. However, it does not prove to be a reliable indicator of a change of copyist in the Paper & Copyists sources, as can be seen in figure 24. There, the color tone of one and the same ink varies simply because different paper with different absorbency and priming was used to compile the musical score.

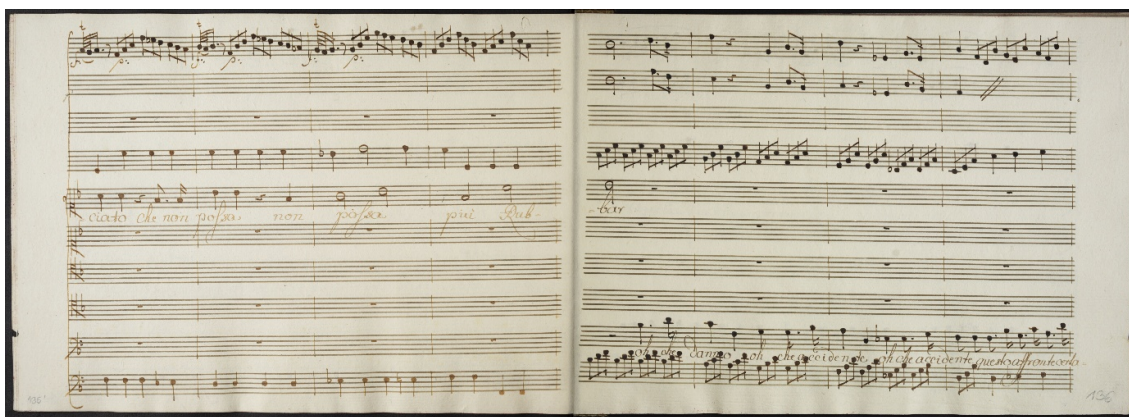


Fig. 24: Change from P65 to P68, no change of copyist (A-Wn Mus.Hs.17849, vol. 1, fols. 135v–136r), by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

Handwriting specialists have repeatedly described the script of professional Viennese copyists as highly stylized, almost artistic, and strikingly uniform.<sup>20</sup> One is reminded of Johann Georg Sulzer’s description of copying drawings and paintings, in which he allows the artist “freer exercise” in the creative process, while the manuscript copyist must remain cold “so as not to overlook anything, and thus everything becomes slower and more artificial.”<sup>21</sup> A. Peter Brown, too, felt Viennese scores were more reminiscent of a copperplate engraving than of handwriting because of the generously spaced, calligraphically precise typeface<sup>22</sup>—achieved even though the copyists never used rulers. This suggests that there was some kind of apprenticeship, and maybe even an introduction to the “house style” in workshops.

But where should the search for tendencies toward script standardization begin? And, more importantly, with which copyist(s)? Among the eighty-four scribes’ hands from the period between 1760 and 1775 documented by Paper & Copyists, only about fifteen percent contributed to more than ten works. These eleven main copyists can—apart from the court copyist Boniface Champée, who was already active in the 1750s—be divided into two groups:

those associated with Theresia Ziss's workshop and those active in other constellations from around 1770 onward.<sup>23</sup> Between 1759 and 1773, Ziss's workshop produced at least ninety mostly multi-volume opera scores for the court. She collaborated with various assistants but maintained close, long-term partnerships with four key copyists (WK60G, 71K, 72D, and 73F).

As long-term collaboration is likely a prerequisite for the development of a particular writing style and standardization, Ziss's example, more than any other, could be used to investigate the question of whether a "house style" was established in any workshops. Her activities as a copyist are now the focus of detailed scholarly investigation for the first time. Therefore, an overview of her biographical background precedes the following handwriting analysis.

### Theresia Ziss's Workshop and Its "House Style"

(Anna) Theresia Harrer was born on April 12, 1700, in Vienna (Fig. 25).<sup>24</sup> She was the daughter of Heinrich Harrer (ca. 1668–1744), a Viennese court official who served as lower and later as upper furrier to the imperial "Trabantenleibgarde," and his wife Maria Clara. Due to the father's courtly status or for other unknown reasons, the Harrer family maintained a close personal relationship with the imperial family, as Emperor Leopold I and his third wife Eleonore Magdalena acted as godparents to Theresia's two eldest siblings.<sup>25</sup>

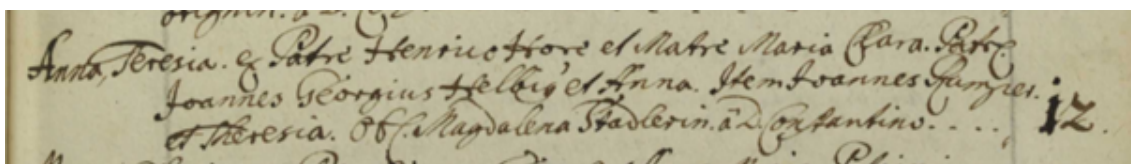


Fig. 25: Baptismal record of Anna Theresia Hore [sic] (A-Wda St. Michael, baptismal records 01–05, p. 589)

On October 16, 1719, in Vienna,<sup>26</sup> Theresia married Johann Andreas (also André or Andreas/Andre Johann) Ziss,<sup>27</sup> presumably from Röschitz in Lower Austria. He entered imperial service as a music copyist in 1720 at the latest<sup>28</sup> and is listed as a "theatrical copyist" in the court music records of 1729.<sup>29</sup> The Ziss couple, who first belonged to Theresia's home parish of St. Michael and then, from 1724 on, to the Schotten parish, had at least fourteen children between 1719 and 1740.<sup>30</sup> Duke Anton Ulrich of Saxe-Meiningen (1687–1763) served as godfather for three of them.<sup>31</sup> Johann Andreas Ziss had some music copyists working for him<sup>32</sup> and in later years was entrusted with the administrative office of concert dispenser in the Vienna Court Music Chapel.<sup>33</sup> The Ziss couple

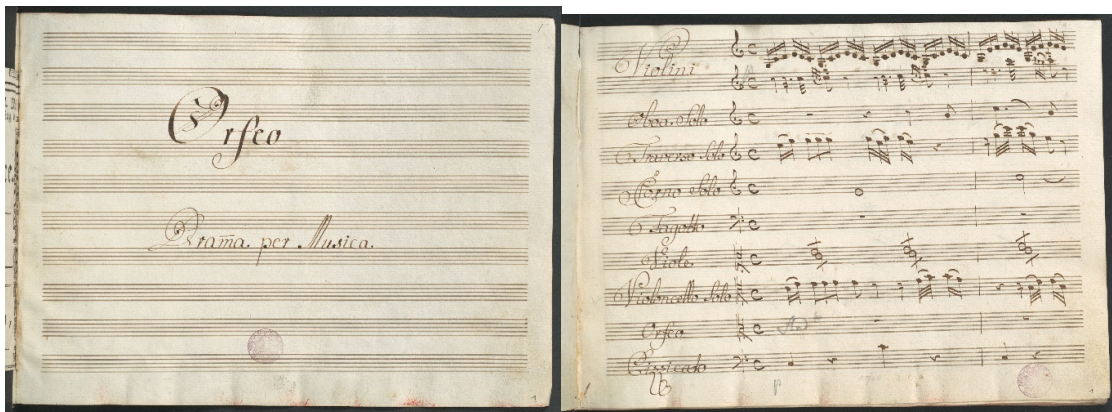
moved several times before Johann Andreas passed away on August 18, 1755, at the age of sixty-three in the Raneckerhaus at Bognergasse.

Entries in the imperial court's payment records, the *Österreichisches Kamerale*, show that Theresia Ziss received a pension as a "Hof-Concert-Dispensators-Wittwe", for example 166 florins in 1762.<sup>34</sup> Presumably due to the fact that none of her children survived infancy,<sup>35</sup> she designated a daughter of Michael Joseph Haderhold, a protocol officer of the Imperial-Royal Lower Austrian Government Council, as her heir in 1770. It remains unclear why she had this will annulled on April 12, 1777—her seventy-seventh birthday—and appointed Maria Rosalia Edle von Ehrenbrunn (ca. 1728–93), "director of the imperial-royal cotton factory on the Schwechat River" ("von der Kays: Königl: Cotton Fabrique auf der Schwechat Directorin"), as her universal heir.<sup>36</sup> Theresia Ziss died about half a year later, on November 5, 1777, of "kaltem Brand" (likely a form of gangrene) at Kärntnerstrasse No. 1088.<sup>37</sup> Her "small fortune" ("weniges Vermögen"),<sup>38</sup> which was finally valued at 228 florins and 27 kreuzers, went to Von Ehrenbrunn on January 28, 1778.<sup>39</sup>

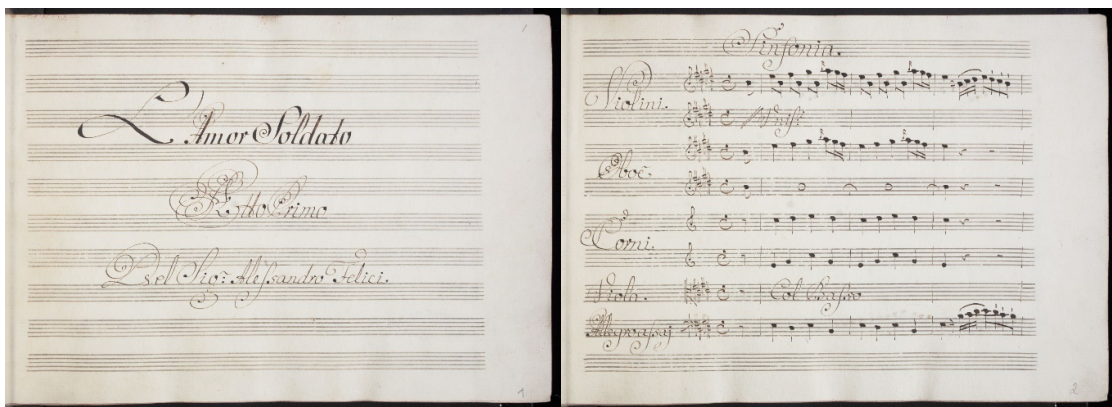
Neither the position of concert dispenser nor that of theatrical copyist was filled after Johann Andreas Ziss's death in 1755.<sup>40</sup> Instead, copying orders for parts and scores were outsourced to independent copyists, including Theresia Ziss and her team.<sup>41</sup> Numerous entries in the payment records of the *Theatralcassa* indicate that Ziss was commissioned to copy sheet music for the German and French theater, for operas and music academies (listed under the category "Music-Copiatu[r]"), and somewhat less frequently also for court banquets, chamber music, and balls (category of "Hof und Camer Music Speesen").<sup>42</sup> Her fee in the 1760s was 7 kreuzers per copied sheet/bifolio. Additionally, Ziss had other clients, such as Prince Joseph Adam of Schwarzenberg (1722–82). In his music collection, invoices and payment receipts from the court copyists Boniface Charles Champée and Theresia Ziss have been preserved (now kept in the Schwarzenberg Archive in Český Krumlov).<sup>43</sup> According to some of these documents, Prince Schwarzenberg, who had his own court orchestra, obtained copies of ballet music performed in Vienna from Ziss's workshop.<sup>44</sup>

Theresia Ziss stands out as the most prolific contributor to the opera manuscripts analyzed in the Paper & Copyists project. Often writing the first sections of scores herself—and occasionally entire volumes—Ziss notated her music with remarkable consistency, both within individual works and throughout her entire career as leader of a copyists' workshop (figs. 26–29).<sup>45</sup>

She gave the bass clef a shape described by Dexter Edge as “pincer” type<sup>46</sup> and classified as typically Viennese: a reversed C (clef open to the left) consisting of two separate strokes and flanked on the right by two dots bracketing the F line. In the analyzed opera scores, most frequently one vertical line is placed between the C and the two dots. Ziss also wrote the C clef in a manner already common among Viennese copyists of the time: with two short horizontal lines framing the C line, three vertical strokes, and one longer, diagonally descending line.<sup>47</sup> The most striking features of Ziss’s treble clef are a straight upward-leading middle stroke starting with a thickening on the second or third staff line and the bulging, large curve of the lower arc.



Figs. 26 and 27: Samples of Ziss’s handwriting from the year 1762 (A-Wn Mus.Hs.17783, vol. 1, fol. 1r and vol. 2, fol. 1r), by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)



Figs. 28 and 29: Samples of Ziss’s handwriting from the year 1773 (A-Wn Mus.Hs.18059, vol. 1, fols. 1r and 2r), by courtesy of the [Österreichische Nationalbibliothek, Musiksammlung](#)

Ziss’s special attention seemed to be on maintaining a uniform script style in her workshop, as most of the copyists she worked with used very similar characters (fig. 30). Unsurprisingly, the writing training necessary for achieving this consistent style has left no visible traces in the opera scores of the

Habsburg collections, as these served as objects of representation and were the workshop's most precious products. Personal idiosyncrasies of each workshop member only become apparent in the details of penmanship and symbol design, which themselves remain constant. The notable exception, as can be easily seen in figure 30, is the more personalized closing sign.

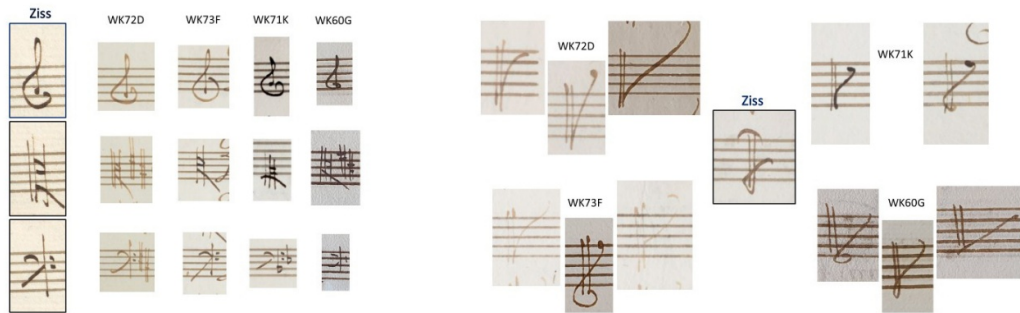


Fig. 30: Clefs and closing signs written by Theresia Ziss and collaborators from her workshop (images extracted from the copyist profiles available at [https://www.mdw.ac.at/imi/ctmv/p\\_und\\_c/main\\_copyists.html](https://www.mdw.ac.at/imi/ctmv/p_und_c/main_copyists.html))

As the earliest Ziss scores examined in the Paper & Copyists project (from 1759) already exhibit an extremely uniform handwriting, it can be assumed that she was already an experienced copyist at that time. This strengthens the evidence that she took over the management of her husband's workshop upon his death and had quite likely been a member of the team even before 1755. Theresia Ziss shaped Viennese copying practices in the early stages of their commercialization during the third quarter of the eighteenth century more than any other figure. The opera scores from her workshop and other copyists found in the Habsburg collections are valuable sources not only because of the music they preserve. Their lavish design is the result of intricate craftsmanship and can only be recognized as "typically Viennese" when one considers the entirety of their material components and the practices they arose from.

## Notes

1. As the opera scores show hardly any signs of wear, it can be assumed that they were largely not used as performance scores but rather regarded as collector's items by the imperial family. In this case as well, it is highly likely and therefore a basic assumption of the Paper & Copyists project that the manuscripts were produced close to the time of their first Viennese performance. To date the scores more precisely, the project team conducted extensive research on the programs of the Viennese theaters. A table of dates of Viennese opera performances from the years 1760–75, supported by a wealth of archival material, is available for download on the Paper & Copyists website: [https://www.mdw.ac.at/imi/ctmv/p\\_und\\_c/dates\\_premiere.php](https://www.mdw.ac.at/imi/ctmv/p_und_c/dates_premiere.php) (all links accessed September 16, 2024).
2. Only regarding the involved singers are there some exceptions, such as copies of F. L. Gassmann's *L'olimpiade* (A-Wn Mus.Hs.9947) and J. A. Hasse's *Il trionfo di Clelia* (A-Wn Mus.Hs.17297), in which the prefatory listings of the singer cast (entitled "Personaggi" or "Attori") also include the names of the performers.
3. Dexter Edge, "Mozart's Viennese copyists," PhD diss., Univ. of Southern California, 2001, esp. chap. 3 (The Analysis of Manuscript Music and Musical Handwriting): 161–438.
4. The book conservator and decorated paper specialist Ilse Mühlbacher has prepared a detailed description of score covers, supported by Konstantin Hirschmann. This listing, sorted by material and design and supplemented with bibliographic references, is available on the Paper & Copyists website: [https://www.mdw.ac.at/imi/ctmv/p\\_und\\_c/covers.php](https://www.mdw.ac.at/imi/ctmv/p_und_c/covers.php). See also Christiane Maria Hornbachner and Constanze Marie Köhn, "Watermarks in Viennese Opera Scores: Toward a Comprehensive Database of Music Paper 1760–1775," in *Artists' Paper: A Case in Paper History*, ed. Patricia Engel et al. (Vienna: Berger, 2023): 484–502, at 488f.
5. The following paper includes a comprehensive description of the history and structure of Elisabeth's collection: Martin Eybl, "Die Opern- und Ariensammlung der Erzherzogin Elisabeth von Österreich (1743–1808): Musizierpraxis im Kontext feudaler Bildungs- und Repräsentationskonzepte," *Die Musikforschung* 68/3 (2015): 255–79.
6. All copyist sigla assigned by the Paper & Copyists project begin with the abbreviation "WK" for "Wiener Kopist(in)" (Viennese copyist). For further data analyses on the workshop of copyist WK71F, see [Constanze Marie Köhn's contribution](#) to this special issue.
7. See Edge, "Mozart's Viennese copyists," 332f.
8. For all opera scores analyzed by Paper & Copyists, scoresheets with a detailed overview of the gathering structure, ruling measurements, papers, and copyists are available for download on the project homepage. (These can be found in the score profiles under "Detailed information"). See, for example, the complete scoresheet of [Mus.Hs.1056](#).
9. Further information on stable and unstable rulings in Viennese opera scores as well as extensive data analysis regarding the transformation process from plain paper to music paper within the value chain can be found in [Martin Eybl and Konstantin Hirschmann's contribution](#) to this special issue.
10. The term "machine" here does not refer to a fully automated device but rather to a large, manually operated apparatus capable of ruling entire pages in a single pass, allowing for the rapid and consistent processing of large quantities of paper. See Jean K. Wolf and Eugene K. Wolf, "Rastrology and Its Use in Eighteenth-Century Manuscript Studies," in *Studies in Musical*

*Sources and Style: Essays in Honor of Jan LaRue*, ed. Eugene K. Wolf and Edward H. Roesner (Madison, Wis.: A-R Editions, 1990): 237–91, at 260.

11. To create these barely visible markings, the paper sheet was folded and the overlapping pages were pierced with a needle. In some cases, such hole marks were applied twice per page to indicate not only the beginning but also the end of the staff lines. Cf. Wolf and Wolf, "Rastrology," 264; Erich Duda, "Wie wurden Notenblätter im 18. Jahrhundert liniert?," *Mozart Studien* 16 (2007): 301–22, at 311.
12. See [Martin Eybl and Konstantin Hirschmann's contribution](#) to this special issue.
13. See A. B. Méguin, *Art de la réglure des registres et des papiers de musique: Méthode simple et facile pour apprendre à régler* (Paris: Audot, 1828); Wolf and Wolf, "Rastrology," 257–64; Duda, "Notenblätter," 303–12.
14. The Paper & Copyists project can thus confirm Dexter Edge's corresponding hypothesis. Edge, "Mozart's Viennese copyists," 356.
15. See Helga Sigl, "Die Buchbindekunst im Mittelalter und in der Frühen Neuzeit: Bibliophilie und Handwerk—Die Wiener Buchbinder," PhD diss., University of Vienna, 2008: 352f.
16. One of the very rare examples of a score where the bifolios were bound together without being trimmed, so that the original deckle edge is visible along the right and bottom margins of each page, is André-Ernest-Modeste Grétry's *Lucille* ([Mus.Hs.10173](#) @LINK zu Partiturprofil).
17. H. A. Pierer notes that the paper trimmings were sometimes sold back to paper mills and added to a new fiber pulp. Heinrich August Pierer, "Buchbinder," in Pierer, *Pierer's Universal-Lexikon der Vergangenheit und Gegenwart oder Neuestes encyclopädisches Wörterbuch der Wissenschaften, Künste und Gewerbe*, 4th ed. (Altenburg: H. A. Pierer, 1857): 396.
18. See, for example, the digitally processed transmitted light images of P71 in the Paper & Copyists database: <https://www.mdw.ac.at/imi/ctmv/ctmv.php?wz=P71>
19. Edge, "Mozart's Viennese Copyists," 186.
20. *Ibid.*, 119.
21. Original wording: "Der Originalmeister ... stellt seine eigene Erfindung dar, sein Geist ist während der [*sic*] Arbeit thätiger, seine Einbildungskraft erhitzter: daraus aber entsteht eine *freyere* Ausübung: ... [der Kopist hingegen] bleibt kalt, und muß kalt bleiben, um nichts zu übersehen, und dadurch wird alles langsamer und gekünstelter." Johann Georg Sulzer, "Copey (Zeichnende Künste.)," in Sulzer, *Allgemeine Theorie der Schönen Künste in einzeln, nach alphabetischer Ordnung der Kunstwörter auf einander folgenden, Artikeln abgehandelt*, vol. 1 (Leipzig: Weidemann und Reich, 1771): 230–31, at 231 (emph. in original).
22. A. Peter Brown, "Notes on Some Eighteenth-Century Viennese Copyists," *Journal of the American Musicological Society* 34/2 (1981): 325–38, at 327.
23. In her [contribution to this special issue](#) Constanze Köhn introduces another workshop, led by WK71F. This workshop became active in the late 1760s, but soon, with the decline of the Ziss workshop, assumed the role of the court's main supplier of opera scores.

24. A-Wda St. Michael, baptismal records 01–05, p. 589, <https://data.matricula-online.eu/de/oesterreich/wien/01-st-michael/01-05/?pg=595><https://data.matricula-online.eu/de/oesterreich/wien/01-st-michael/01-05/?pg=595>. The surname of Theresia's parents appears in the records of the parish of St. Michael in various spellings (Horer, Hore, Horck, Harer, Harrer), e.g. at Anna Theresia's baptism ("ex Patre Henrico Hore et Matre Maria Clara"). For one of Theresia Ziss's children, her son Johann Carl Heinrich, born in 1728, the grandparents Heinrich and Maria Clara "Harrer" acted as witnesses to the baptism. A-Wda Schotten, bapt. rec. 01–29, fol. 260v.
25. A-Wda St. Michael, bapt. rec. 01–05, pp. 317, 358.
26. A-Wda St. Michael, marriage records 02–04, p. 254.
27. According to the records of the parish of Röschitz (near Horn, about 20 kilometers from the Moravian border), an Andreas Züss was baptized there on November 29, 1692. Apart from the correlation between the date of baptism and the age of court copyist Andreas Ziss given in the death record, this identification is supported by the fact that the surname Ziss only appears more frequently in the Viennese parish records when Andreas Ziss married. In the Röschitz records, on the other hand, the name appears notably frequently even before that (and to this day). Röschitz parish archive, baptismal, marriage, and death records 01, 2, 3–02, p. 91.
28. Andreas Ziss first appears in the Viennese church records as imperial "Notenschreiber" or "Musical-Notist" on September 13, 1720, the day his second daughter Maria Catharina died: A-Wda St. Michael, death rec. 03–03, fol. 1032v, A-Wsa, Vienna mortuary records (Wiener Totenbeschauptokolle) 1720–1722, fol. 66v. According to the court schematisms of the years 1724, 1726, 1729, 1731, and 1734, he held this position together with Andreas Amiller.
29. Adolf Koczirz, "Exzerpte aus den Hofmusikakten des Wiener Hofkammerarchivs," *Studien zur Musikwissenschaft* 1 (1913): 278–303, at 289; Josef-Horst Lederer, "[...] von denen eingangs benannten Supplicanten unter eines jeden eigenen Hand: Unterschrift Copiaturen anbegehret.: Vier Eingaben zur Nachbesetzung einer Kopistenstelle am Wiener Hof aus dem Jahre 1755," in *Beiträge zur Wiener Gluck-Überlieferung*, ed. Irene Brandenburg and Gerhard Croll (Kassel: Bärenreiter, 2001): 73–94, at 75, fn. 6.
30. A-Wda St. Michael, bapt. rec. 01–08, pp. 53, 99, 163, 258; A-Wda Schotten, bapt. rec. 01–28, fol. 268r, 01–29, fols. 31r, 146r, 260v, 1–30, fols. 64v, 185v, 1–31, fols. 39v, 144v, 243r, 1–32, fol. 294r. See also Hannelore Gericke, *Der Wiener Musikalienhandel von 1700 bis 1778* (Graz: Böhlau, 1960): 109 (Gericke counts eleven children).
31. A-Wda Schotten, bapt. rec. 01–30, fol. 185v, 01–31, fols. 144v, 243v. Duke Anton Ulrich's music collection was probably also expanded with the help of Johann Andreas Ziss to include numerous works from the Viennese repertoire. Cf. Lawrence Bennett, "A Little-Known Collection of Early Eighteenth-Century Vocal Music at Schloss Elisabethenburg, Meiningen," *Fontes Artis Musicae* 48/3 (2001): 250–302; Maren Goltz, *Musiker-Lexikon des Herzogtums Sachsen-Meiningen (1680–1918)*, 3rd ed. (Meiningen, 2012): 15–18; Goltz, *Die Wiener Libretti-Sammlung des Herzog Anton Ulrich von Sachsen-Meiningen* (Meiningen, 2008). Further information about Duke Anton Ulrich's connections to the Viennese music scene and the origins of parts of his music collection can be found in Emilia Pelliccia, "His Voice and Something More: Francesco Borosini's Cantata Quando miro o stella o fiore for Anton Ulrich, Duke of Saxe-Meiningen," *Musicologica Austriaca: Journal for Austrian Music Studies* (January 13, 2022).
32. Lederer, "Supplicanten," 72–76.

33. According to L. v. Köchel's surveys, he was employed as "Konzertdispensator" from 1746 to 1754. Ludwig von Köchel, *Die Kaiserliche Hof-Musikkapelle in Wien von 1543 bis 1867. Nach urkundlichen Forschungen* (Vienna: Beck, 1869): 81.
34. A-Wös FHKA NHK Kaale Ö Books 1–2 (1762), vol. 002 (Index), p. 80, no. 134 (March 1762).
35. Vienna mortuary records 1720–22, fols. 66v, 299r, 1724–25, fol. 340v, 1726–27, fol. 121r, 1727–28, fol. 81r, 1728–29, fol. 104v, 1729–30, fol. 436v, 1732–34, fols. 254r, 302r, 1734–35, fol. 437r, 1735–36, fol. 265v.
36. A-Wös HHStA HA OMaA 816–31, probate proceedings Ziß Theresia, widow of a court copyist 1777 (Verlassenschaftsabhandlung Ziß Theresia, Witwe eines Hofkopisten 1777). Rosalia, née Wagenheim, was married to one of the factory managers, Johann Jacob Wolff Edler von Ehrenbrunn. He donated the church of St. Jakob in Schwechat in 1764/65. Rosalia died in Schwechat just one month after her husband on May 30, 1793, at the age of 65. Schwechat parish archive, death rec. 03–05, p. 26.
37. Vienna mortuary records 1777 (L–Z), section Z, fol. 17r; A-Wda St. Stephan, death rec. 03–33, fol. 56r; burial records (Bahrleihbuch) 03a–101, fol. 360r: burial in the "New Crypt" ("Neue Gruft") on November 7, 1777.
38. Original wording in the will dated April 12, 1777: "[by an unknown scribe:] ... setze ich ein zu meiner *Universal* Erbin die Hochwol-Gebohrene Frau Rosalia Edle von Ehrenbrunn, dieser solle mein weniges Vermögen, in was es nur immer bestehet, ganz, und vollkommen zugehören, und verbleiben ... So beschehen in Wien. den 12. April. 1777. [in Ziss's handwriting:] Anna Theresia U. Zissin Gebohrene Harrerin."
39. Inventory in the probate proceedings (see note 33).
40. Josef-Horst Lederer has analyzed court records from 1755 about a selection process for further copyist services. They show that Franz Xaver Riersch was commissioned to copy church music as well as table and chamber music. For the former he was granted an annual salary, for the latter he was paid per bifolio. Lederer, "Supplicanten," 75f.
41. Brown, "Notes," 93; Thomas A. Denny, "Wiener Quellen zu Glucks 'Reform'-Opern: Datierung und Bewertung," in *Beiträge zur Wiener Gluck-Überlieferung*, ed. Irene Brandenburg and Gerhard Croll (Kassel: Bärenreiter, 2001): 9–72, at 27.
42. See, for example, the *Theatralcassa* account books from the period April 1760–April 1764: A-Wös FHKA SUS HZAB 356–371. I would like to thank Martin Eybl for examining these sources and providing me with his excerpts.
43. Bruce Alan Brown, "Wiener Ballette im Schwarzenbergischen Archiv zu Cesky Krumlov," in *Tanzdramen, Opéra-comique: Kolloquiumsbericht der Gluck-GA*, ed. Gabriele Buschmeier and Klaus Hortschansky (Kassel: Bärenreiter, 2000): 9–34; Dexter Edge, "Viennese music copyists and the transmission of music in the eighteenth century," *Revue de Musicologie* 84 (1998): 298–304, at 303; Zálaha, Jiří, "Hudební život na dvore knízat ze Schwarzenberku v 18. století," *Hudební věda* 24/1 (1987): 43–62.
44. In January 1760, for example, Ziss invoiced him for the parts for C. W. Gluck's ballet *Le Suisse* GluckWV 2.2.22, which comprised sixty-five copied sheets. The fee amounted to 6 florins and 30 kreuzers, i.e., 6 kreuzers per copied sheet (see the facsimile of the invoice in Christoph

Willibald Gluck, *Ballettmusiken*, ed. Irene Brandenburg with a foreword by Bruce Alan Brown, Christoph Willibald Gluck. *Sämtliche Werke II/3* (Kassel: Bärenreiter, 2022): LXXXIV.

45. Further character types of Ziss's handwriting, such as time signatures, notes, and rests, are shown in her profile on the Paper & Copyists website: [https://www.mdw.ac.at/imi/ctmv/p\\_und\\_c/copyists\\_detail.php?kop=WK71P](https://www.mdw.ac.at/imi/ctmv/p_und_c/copyists_detail.php?kop=WK71P)
46. Edge, "Mozart's Viennese copyists," 267–69.
47. See, for example, the handwriting samples in Lederer, "Supplicanten."