--The Beginning of Music Printing in Germany in the Fifteenth Century

Mary Kay Duggan

With the completion of the first descriptive bibliography of books printed with music in German lands in the fifteenth century, it is now possible to propose a history of the invention of music printing and its successors. **SLIDE 2 CorpusGraph** Of the 275 German music incunabula, 101 contain printed notes and staves, 38 have only printed staves (often completed with manuscript music), and 106 have space left blank (often with printed text) for the addition of manuscript music. Together with at least 250 music incunabula printed elsewhere in Europe, 17% of some 30,000 incunabula contain printed music or space for it.

It took a couple of decades after Gutenberg's first printed book, a Bible of about 1454, for someone to invent a way to print music. There is only one surviving copy of that first book, **SLIDE 3 Graduale 1473** a large folio gradual with music on every one of its 320 pages. My talk will begin with a review of that rather clandestine adventure, with no printer, place, or date. It was followed by music printed in Basel, Switzerland, with the approval of the pope, the Holy Roman Emperor, and the archbishop of Basel. After a review of the work of some of the printers who created music types and printed the liturgies of many countries, the paper concludes with a look at songs and pamphlets that contain music printed from woodcuts, inexpensive editions directed to lay performers as well as the clergy, with texts in German as well as Latin.

The first printed music book, a gradual or book of music for the Mass to be sung by the choir, requires many complex neume designs for the melismatic plainchant. Attempts to establish a place and date for that book rely on several clues. A comparison of the watermarks of its paper with other incunabula that can be dated narrows the chronology to the early 1470s and suggests Augsburg**.** An examination of copies of the two other printed books that use the same alphabetic type, without music, reveals one that was completed by the scribe in 1473. The text includes the feasts of saints important to Augsburg and Constance; Constance had no early printing. The binding is signed by an Augsburg binder. I conclude that the current attribution to South Germany about 1473 should add "Augsburg?".

What were the technical challenges faced by the printer in taking written music to print?
The staves must be printed in very straight lines to allow placement of music notes on proper lines and spaces. The staves of the gradual are printed in black rather than the usual red for liturgical books, and they have five lines rather than the four that are common for plainsong at the time. Such attributes likely reflect the manuscript that the printer received to copy. Double lines are printed at both sides of the staves, on the left for clefs and on the right for directs to inform the singer of the coming note on the next staff. Most unusual, perhaps unique to this book, is the extension of those printed double lines to the top and bottom edges of the paper. **SLIDE 4 MS Gradual. large** A manuscript gradual illustrates how scribes did extend such double lines to the ends of the page. **Slide 5 MS Gradual detail** The detail of the scribe at the bottom of the page shows the sequence of his work: the red staves were drawn first, the black

text added, and he is now adding the notes. That sequence is usually followed by the printer, staves first in red, then notes and text in black. Finally the red and blue initials are drawn on the page; note the black, red, and blue inks at the side of his desk. An illuminator completed the page, in this case adding portraits of himself, wife, and scribe. **SLIDE 6 1473 Gradual** The double long metal rules of the printed gradual had to be locked up in a forme to be inked and printed and the extension of those lines to the edges of the pages would have made the forme very large, requiring a printing press with a platen size that would have been quite unusual at this time.

The music type has an ambitious total of twenty-one designs. A most unusual music type design appears only in this book, apparently duplicating a design from the copied manuscript. The design with a curved hook at its left side is the first of a two-note neume for one syllable of text, the second note higher in pitch. **sing** I

An examination of the alphabetic type reveals printed letters that wander a bit up and down across the lines. Some letters (for example, 5th staff. the final s, d, m) are larger than others. Whoever cut these letters and cast them in metal may well have learned his skill decades earlier. I have proposed that there were two different individuals responsible, one for the first music type and one for the alphabetic type.

That first music type was never used again and no music would be printed north of the Alps until 1481. The second appearance of music type was in Rome and I suspect that the inventor of music printing may have taken his book to Italy to demonstrate his technique. **SLIDE 8 Missale Romanum 1476** A Roman missal was printed in Rome in 1475 by a northerner, Ulrich Han, without music. He reprinted it the next year with the second known music type, cut in the designs of square plainchant notation common to Italy. The music in the missal was to be sung by the priest rather than the choir; its melodies were much less complex. Han needed only seven designs, plus clefs and direct, to print them. The beautifully cut rounded gothic designs of the letters of the alphabet as well as the square notation of the neumes of plainchant would not serve music readers on the northern side of the Alps, who would also miss the double vertical lines at the ends of staves.

SLIDE 9 Basel The story of the printing of liturgical books returns north, this time to Basel, Switzerland, which seems to have been chosen for centralized production of liturgical books for an international audience. Why Basel? That city was the site of the international church Council of Basel that had ended in 1459 with the ambitious goal of supplying all of Europe with liturgical books with newly reformed texts. Many of the members of the Council of Basel had supported the Roman rite to be printed for all, but German synods refused. Gutenberg did not print a missal, but a Bible instead. Music printing waited for the approval of a new pope who allowed Germany and other northern dioceses to print their own texts. In Basel in the 1480s, forty-five liturgical editions appeared for dioceses across Europe, from Germany to France, Scandinavia, and England. After the first Basel missal in 1479,

a second missal was printed by Bernhard Richel with a colophon that stated that the edition was approved by Pope Sixtus IV, Emperor Frederick III, and the archbishop of Basel.

The second German music type was used for the fourth Basel missal of about 1481, printed by the major Basel printer Bernhard Richel. **SLIDE 10, Missale Basiliense 1481** The music type uses only eight neume designs, plus clefs and direct. But was Richel, the printer listed in the colophon, the music printer? He had printed missals in 1480 and 1481 without music. He died in 1482, at the age of 62. The book is one of the last books printed by Richel and the only one to contain printed music, and it is possible that he printed the alphabetic portion of the missal and left the music leaves to be completed by an associate. That hypothesis is supported by the fact that on this leaf (CXL), the printed text of column one and the final line of column two are straight and well-locked up, while the music text of column one and two have problems. The first two staves of column one are fine, but the first staff at the bottom of that column begins too low under the red text ("De resurrectione domini prefatio"), resulting in insufficient room for a full second staff. This problem was resolved by printing only a two-line staff whose lines also slant downward to the right. The required black notes could fit on a two-line staff, but were typeset for a four-line staff, and thus the notes float in space. The type from which the text and notes in the second column were printed appears to have been poorly locked up, sagging at the end of lines. As a result, the music notes do not fall on the appropriate lines and spaces.

SLIDE 11 BASEL The next figure in music printing in Basel is Michael Wenssler. By 1475 he had the largest printing establishment in Basel, with twenty-nine employees, and he paid more tax than colleagues such as Richel, from which we can deduce that he had several presses and staff to operate them. He was also described as a typefounder (*Giesser*) and his workshop likely included a type foundry. During his lifetime he used twenty-four alphabetic types and three music types: two gothic plainchant types, one for missals and one for large folio choirbooks, and a roman plainchant type for a missal for England. Wenssler had worked with Richel from 1475 to 1479, and began printing Basel missals in 1481 on his own, with space left blank for manuscript music. A hiatus in Wenssler's activity appears between 1483 and 1485, a period during which his name appears in almost no books. That hiatus could have been for the preparation of the music types necessary for adding music to missals and choirbooks. In 1486 he began printing staves in his missals. In 1488 Wenssler used his largest music type for an amazing five editions of choirbooks: three graduals and two antiphonaries. **SLIDE 12. Antiphonary. Wenssler** Wenssler's choirbooks are of the highest quality, spacious in layout, with beautifully cut music notation in twenty-one designs for neumes, clefs, and B flat signs that match the scale of his alphabetic letters superbly. His staff of excellent printers were able to set in type and print in red and black some 2,000 pages of choir music in one year. Note how the text is broken into syllables to allow the elaborate neumes to be set above the appropriate syllables. His printing staff was trained to read music and understand the relationship of complex neumes to the syllables of text.

Wenssler had begun printing with music types in 1488 and by the end of the next year he was bankrupt. Missals and other liturgical books are commissioned by bishops for their dioceses. The finances come from those dioceses and the diocese also had the responsibility for distribution of copies. Wenssler's choirbooks were intended for a broad distribution; extant copies were purchased in Germany, Switzerland, Austria, and Denmark. Who was in charge of distribution of those thousands of choirbooks? Had Wenssler been misled by central ecclesiastical authorities about his responsibilities for the ambitious choirbooks? He fled to France where he continued to print liturgical books, without music.

Even before Wenssler's downfall in 1489, centralized production in Basel had been challenged by individual wealthy archbishops who used their finances to bring some of the best printers of the time to their palaces to set up subsidized printing shops under lifelong contracts to print only their books. **Slide 13 Graph** Half of all German printed music of the fifteenth century was financed by the bishops who supported high-quality music types created by the Reysers in Würzburg, Erhard Ratdolt in Augsburg and Johann Sensenschmidt in Bamberg, as well as supporting well-trained craftsmen who set and printed the music in luxurious folio books.

The first such contract of 1479 documents well the terms under which printer Georg Reyser left a well-established printing shop in Strasbourg to live within palace walls above Würzburg for his lifetime, with a guarantee of ample time and financial backing to produce excellent new music and alphabetic types. He never married. Only after the death of Prince-Bishop Rudolf von Scherenberg (1401-1495) would Reyser be granted citizenship in the town of Würzburg and the right to print editions of his own choosing as well as the archbishop's, including German songs.

Reyser came to Würzburg in 1479 and by 1481 music type had been designed, cut and cast for the first missal for Würzburg.. **SLIDE 13 GG3 Gothic Large Missal** His first music type of nine designs, the third music type in Germany, was adequate for the chant sung by the priest, but more poorly cut than the design used in 1481 by Richel in Basel. The F clef and the direct or custos use the same type. **SLIDE 14 Graduale** In 1493 Reyser introduced a very large gothic plainchant type of a much improved design and with more type sorts to handle the melismatic plainchant of the Würzburg gradual and antiphonary. The alphabetic type design and the gothic and Lombardic large initials are of the highest quality. One of the innovations of Reyser's very large type is the casting of short segments of staves that could be put together in any number, allowing space for initials and rubric. The segments are so well cut that it is difficult to see any space between staff metal pieces. **SLIDE 15 Contemporary staff segment type punch** A fifteenth-century punch from the Plantin-Moretus Museum in Antwerp shows how the staff lines were cut to the very edges of the face of a six-inch punch to create type that could be set tightly together.

Not mentioned in the Würzburg bishop's contract with Georg Reyser is his relative Michael Reyser, probably a brother. Michael had owned the house in Strasbourg in which he and Georg had established a printing shop in the 1470s. A letter written by Würzburg Bishop Rudolph on 25 April 1480 to the magistrate and City Council of Strasbourg requested that Michael, one of the journeymen or *Gesellen* of the master printer Georg, be released from prison in Strasbourg because the important work of printing missals for Würzburg could not be completed without him. I propose that Michael is actually the music printer for Georg, that Michael is a true music printing specialist. He was released from prison and a string of missals for Würzburg and Mainz were printed. **SLIDE 16 Obsequiale M. Reyser** Then Michael then got an exclusive contract to print liturgical editions for the neighboring Diocese of Eichstätt for which he created another music type.

SLIDE 17 Entrepreneurs Such ecclesiastical financing was rarely available by the last decades of the fifteenth century, and music printing moved to large urban environments that had the infrastructure for technological development, an available labor force, and an established distribution network.

For example, Conrad Kachelofen started his career in Leipzig as a merchant of paper, groceries, and wine. By the end of the century, he had become the most important printer in Leipzig. Instead of designing and cutting types, he was satisfied to purchase music types from others. Instead of relying on commissioned liturgical books, Kachelofen printed at least twelve editions of the liturgical psalter, a genre that was based on the fixed text of the psalms and did not need the approval of ecclesiastical authorities. He also printed three missals, not always with permission from bishops. In his psalters he usually left blank space for owners to insert the incipits of chant, but in one folio edition of 1497 (DG 223) he printed staves. I examined five of the eleven surviving copies and found that four had manuscript plainchant entered on the staves, three gothic notation and one roman notation. In addition to notation on printed staves, one copy had several inserted leaves with further notation, one had a dozen manuscript hymns pasted over printed ones, and **SLIDE 18 Psalter Clivis** one had scribal insertions in the printed psalms of a manuscript clivis to denote the flex or falling break of the psalm modes when the first half of a verse is sufficiently long. Finally, one had a manuscript German song "Herr gott dich loben wir" written on the beginning blank leaf. Such manuscript additions are proof of how important music notation was to the buyers of the folio liturgical psalter who would use the book for daily sung performance of the Hours.

Another urban entrepreneur is Georg Stuchs, a major printer in Nuremburg. He printed 132 editions by 1513, 86 liturgical books, and 21 containing music. He pursued printing contracts with east and north German dioceses that reached as far as the borders of present-day Sweden, Austria, Hungary, Poland and the Czech Republic. As an independent entrepreneur, he sought financial backers from far and wide: Buda, Hungary, Augsburg, Cracow, Poland, Nuremberg.

The fact that he issued more than one edition on the same day (the folio and octavo editions of the Magdeburg breviary on 20 June 1491) suggests that his printing establishment had multiple presses. In his last years he devoted himself to bookselling, an occupation he had pursued for decades.

Stuchs is praised for the quality of his eighteen text types and two plainchant types which he designed and created himself. The bishop of Salzburg praised the music type in the missal printed for his diocese, saying that "now even an ignorant man could read and sing Mass from this missal." **SLIDE 19, Missale Benedictinum Mellicense, about 1499**

A final group of German music printers relied on the woodcut craftsmen available in medieval cities instead of investing in expensive metal music type. **SLIDE 20. *Excerpta musicae*** The textbook *Excerpta musicae omnis cantus Gregoriani et contrapuncti* was published about 1496 with woodcut staves; music students had to add the notes, presumably after attending class. **SLIDE 21** The music theory textbook of Georg Keinspeck, a music professor at the University of Basel, went through five editions by 1506. *Lilium Musicae* (Lilies of Music) , is a 16-page quarto that was first printed in Basel in 1498 and reprinted the next year in Augsburg from the same woodcuts. The legibility of the notes and staves cut from wood is impressive.

SLIDE 22 Dozens of songs were published as broadsides or small pamphlets in the fifteenth century, most without music, though manuscript versions often give us the melodies. This woodcut on the cover of "Eyn hypsch lied wie sich yetz geistlich und auch weltlich halten" helps visualize who might have sung such early printed songs. **SLIDE 23** The law professor at the University of Basel, Sebastian Brant, translated several plainchant melodies into German and published them. The sequence *Verbum bonum* became *Das wort ave lond uns singen.* It was published by Thomas Anshelm in Pforzheim in three editions between about 1500 and 1506, each time with a new music woodcut that corrected several textual errors while introducing new ones. Only one copy of each is extant, the survival rate for broadsides being tiny.[1] The copy of the earliest edition contains a woodcut image of Mary Jesus above the song, framed by columns of prayers printed from metal type, with the woodcut music below. The copy survived because it was pasted on a leaf of a manuscript collection of sequences at the library of the Benedictines of St. Gall (Codex Brandes Nr. 546, f. 1v). **SLIDE 24** The only copy of the third edition contains only the song, though it is possible that the trimmed music once had the image above. If the edition size were 500 to 600, the normal run of a printing press in a day from a forme of metal type, the three editions would amount to 1500 to 1800 copies, strong evidence of the popularity of the performance of German sacred songs in the Catholic era that preceded the Reformation.

[1] Richard S. Field calculated that only 7% of the known 5,235 broadsides printed entirely from wood blocks exist in more than one copy. Richard S. Field, "Early Woodcuts: The Known and the Unknown), in *Origins of European Printmaking. Fifteenth-Century Woodcuts and Their Public*, by Peter Parshall and Rainer Schoch with David S. Areford, Richard S. Field, and Peter Schmidt (New Haven: Washington, D. C.: National Gallery of Art and Nuremberg: Germanisches National museum in association with Yale University Press, 2005), p. 26.

SLIDE 25 Title That concludes this brief review of music incunabula printed in German lands. I hope it encourages you to seek the history of all of the 275 editions described in my book *German Music Incunabula: Printing and Reform.*