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Venetian capital, German technology and Renaissance culture in the later fifteenth century

MARTIN LOWRY

There can be few more eloquent witnesses to the cultural and economic links between Venice and Nuremberg than the celebrated *World Chronicle* of Hartmann Schedel. Twenty-six cities, mostly German and Italian, were honoured in the two-page illustrations that stand alongside those of *Polifilo* as the greatest achievements of the fifteenth-century woodcut. But generations of admiring bibliographers have recognized that two of them had a special influence on the work. Nuremberg decided the book's outward form. Schedel was a Nuremberger by birth, and had served as the community's doctor for nine years when the chronicle was published in 1493. The edition was handled by Anton Koberger, the most successful entrepreneur in Nuremberg or the whole empire: a Latin translation was prepared by the chancery humanist Georg Alt; illustrations were designed by Michael Wolgemut; and the whole project was financed by a prominent local worthy named Sebald Schreyer. We need look no further than the title-page to realize that the work is thoroughly Gothic in form. But much of the substance is Italian. The main source has long been identified as Jacopo Filippo Foresti's *Supplementum Chronicarum*, a survey of events from the Creation to the writer's own time which first saw the light of day in Venice during 1483 and was reissued ten times, with several additional supplements, during the next three decades. Not only the all-embracing span of Schedel's account, but a good many of its details, derive immediately from Foresti. The idea of including short biographical sketches of prominent writers and intellectuals certainly came from him. And when we turn from Foresti's woodcuts of the Creation to Schedel's, and add that the Nuremberger's other principal sources were Flavio Biondo and Platina, we get a strong impression of the German team trying to do the same job as the Italians with slightly greater panache.[1]

1 W. Copinger, *Supplement to Hain's Repertorium Bibliographicum* (London, 1895–1902), 14508: *Catalogue of Books Printed in the Fifteenth Century now in the British Museum* (BMC) II, 437. On sources M. Haitz, *Harmann Schedels Weltchronik* (Munich, 1899); on illustration E. Shaffer, *The Nuremberg Chronicle – a* Pictorial World History from the Creation to 1493 (Los Angeles, 1950). Main studies by K. Schotten-

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But from our point of view, the special importance of Schedel's work lies in the unusually rich documentation which surrounds it. Roughly two-thirds of his library, which numbered 623 volumes in 1507, is still in existence. We also have an appreciable number of letters which passed between Hartmann and his elder cousin Hermann between 1455 and 1478, most of them dealing with matters of common literary and intellectual interest.[2] By using these two sources together we can compare the attitudes of German visitors to Italy with the reality which lay behind the exchange of ideas which they experienced, and see that this exchange was not a simple matter of give and take but a highly complex process of fusion. Take, for example, the gruesome account which Schedel gives on folio 254 v of the alleged murder of 'Little Simon' by the Jews of Trent in 1475. The source is definitely the ten-folio pamphlet *De puero Simone* printed by Gabriele di Pietro in Venice later in the same year; the names of the Jews, and the posture of the victim, make that quite clear. So the original is at first sight Italian, and Venetian. But one of the authors was Raphael Zovenzoni, a humanist born in the imperial city of Trieste, educated at the school of Ferrara and the University of Padua, living in Venice and working under the patronage of his student-contemporary at Padua, Bishop Johann Inderbach of Trent. By Schedel's time, important fields of south German and north Italian culture were already becoming thoroughly intermingled. If we follow up references in his correspondence to the various contacts he used we can see how this happened, and what effects it produced. We can in fact turn Schedel's *Chronicle* into a thread to guide us through the labyrinthine interaction of the Italian and Northern Renaissances.[3]

The exchange of letters between the two cousins began about 1456, when Hermann was establishing himself in medical practice in Augsburg, and Hartmann, still in his mid-teens, was studying at Leipzig. For the next seven years their main topic of interest was Italy, and the need for Hartmann to dip into its 'treasury of knowledge' if he wished to make a success of his career. Reformation studies have tended to fix our attention on the gulf between German and Italian values; it is important to remember that behind the public expressions of hostility lay a German admiration for Italy which at times hardly stopped short of idolatry, and if the admiration had been less intense, the hostility would have been less bitter as well. Schooled by their reading of

loher, 'Hartmann Schedel, 1440–1514'. *Philobiblon*, 12 (1940), 279–291, and D. Duniway, 'A study of the Nuremberg Chronicle', *Papers of the Bibliographical Society of America*, 35 (1941), 17–34.

2 R. Stauber, *Die Schedeïiche Bibliothek* – Studien und Darstellungen aus dem Gebiete der Geschichte VI, 2–3 (Freiburg, 1908). P. von Joachimsohn (ed.), *Hermann Schedels Briefwechsel (1452–1478)* (Tubingen, 1893).

3 J.-M. Tuberinus, *De puero Simone*, Hain 15659, BMC V, 201. On Zovenzoni's life and career see B. Ziliotto, *Raffaele Zovenzoni, la vita, i carmi* (Trieste, 1950).

Petrarch, Hermann and Hartmann were convinced that 'this art of poetry rarely finds a home outside Italy', and that 'no field of human learning which lacks eloquence, can enjoy any prestige in human eyes'. With a more practical eye on his own career, Hartmann observed in 1462, just before he left for Padua, that men who spent even a short time in Italy quickly gained advancement, wealth and the reputation that went with both.[4] The journey to Italy was much more than an aesthetic affectation. At times indeed Hermann seemed to regard it as a kind of shock-therapy. During the later 1450s he repeatedly grumbled that Hartmann's brother Johann was drifting around Leipzig 'with no useful occupation', and recommended a spell in Venice to accustom him to ideas of industry and thrift. When Johann went south about ten years later he became a wholesale convert sure enough, but not in the way his cousin had intended. Instead, he absconded from Padua and went to earth in a monastery in Ferrara, where he was discovered in some kind of trance, incoherently mumbling that he could never return home. A well-meaning chaplain from Venice named Caspar Hauser led a 'cut-out operation' to rescue him in July 1469, pointed him northwards again and wrote anxiously to warn Hartmann what to expect. But Johann's admiration for Italy had, in its way, been as great as that of his relatives.[5]

Compared to the visits of Celtis or Mutian, Hartmann's stay in Italy was not particularly long or varied. He seems to have reached Padua in the latter part of 1463, and was certainly back in Germany by the end of 1466. His period of study therefore coincided exactly with the first Greek lectures of Demetrius Chalcondylas and two of the Athenian's orations, copied in Hartmann's own hand, survive among his manuscripts.[6] Unfortunately, the letters between the two cousins during this period tell us very little about the atmosphere within the university, or about Hartmann's activities outside it. Most are earnest homilies from Hermann, urging his young kinsman not to get into the wrong set. But taken along with other correspondence of the same years, these letters help to show how a system of contacts based on dynastic or local loyalties could support German visitors while they were in

4 *Briefwechsel*, Ep. 45, 47, pp. 94, 100. Petrarch's comment (*Epistolae Seniles*, IX, 1), 'oratores et poetae extra Italiam non quaerantur', was in fact part of his polemic with the French humanists: see G. Ouy, 'Paris – l'un des principaux foyers de l'humanisme en Europe au debut du XVe siècle', *Bulletin de la Société de l'Histoire de Paris et de l'Île de France*, 97 (1970), 71–98. But German writers were sensitive to this kind of slight: see G. Strauss (ed), *Manifestations of Discontent in Germany on the Eve of the Reformation* (Indiana U.P., 1971), esp. pp. 64–88; A. G. Dickens, *The German Nation and Martin Luther* (London, 1974), 21–71.

5 *Briefwechsel*, Ep. 5, 82, pp. 6–7, 180–2.

6 *Ibid.*, Ep. 55, 70, pp. 109, 164; Duniway, 'Nuremberg Chronicle', 18–19. D. Geanakoplos, 'The discourse of Demetrius Chalcondylas on the inauguration of Greek Studies at the University of Padua in 1463', *Stud Renaissance*, 21 (1974), 118–44; see Stauber, *Schedeliche Bibliothek*, 152. Compare the careers of other German humanists in L. Spitz, *Conrad Celtis, the German Arch-Humanist* (Harvard U.P., 1957) and *The Religious Renaissance of the German Humanists* (Harvard U.P., 1963), esp. pp. 130–50. Mutian was in Italy from 1494 until 1503.

Italy, and promote the cultural interests of those who remained at home. A new visitor or student was recommended to someone already in Italy, preferably someone of superior social standing; in return for such condescension the protégé would look out for the books or artefacts which his sponsors wanted. So we find Hermann recommending Ulrich Gossembrot to William von Reichnau, a canon of Eichstatt, who was studying at Padua during 1459; and it was probably through this channel that he secured the manuscript of 'Terence with a commentary, excellently written' which he had been seeking a year or so earlier and which is now Latin MS 72 in the Staatsbibliothek of Munich.[7] More interesting, we find Gossembrot sending home what he calls 'natural likenesses cast in lead' for delivery to a painter named simply 'Mang'. These must have been portrait medallions, and I wonder if it was this or a similar contact which gave Hartmann the idea of including portraits of intellectuals and statesmen in his *Chronicle*, even if it meant turning Pisanello's likeness of John Palaeologus into his own version of Sultan Mohammed.[8] There is nothing particulary adventurous or surprising about these exchanges, but they do show that the celebrated relationship between Dürer and Pirckheimer had many precedents.

But the strangest and most significant feature about this phase of the Schedel correspondence lies in what it fails to mention. The letters begin just after the appearance of the 42-line Bible. The quest for books is one of their constant themes, and there are repeated complaints that they cannot be found because the local scribes are 'sunk in idleness and debauchery'. Yet nowhere is there a mention of Gutenberg's invention, and there is no trace in any of the library catalogues of a title which could describe one of the early editions from Mainz, Strasbourg, Bamberg or Cologne. What makes this all the more astonishing is that Hartmann joined the Nuremberg delegation to the marriage of Charles the Bold and Margaret of York in the summer of 1468. We have positive proof in the purchases made by John Russell that printed books were available in Bruges by that time, and a strong suggestion in William Caxton's future career that they provoked a good deal of discussion in the diplomatic community. Hartmann gives no hint that he was aware of them. Those who created the new technology do not seem to have been very forward in marketing it.[9].

7 *Briefwechsel*, Ep. 7, pp. 9–11. Stauber, *Schedeliche Bibliothek*, 113. C. Halm and G. Laubmann, *Catalogus Codicum Latinorum Bibliothecae Regiae Monacensis* (Munich, 1868), I, pt 1, 12.

8 *Briefwechsel*, Ep. 23, pp. 54–9. Duniway, 'Nuremberg Chronicle', 28.

9 *Briefwechsel*, Ep. 55, 70, pp. 109–12, 164. On Russell's Cicero see J. Oates, *A Catalogue of the Fifteenth-Century Printed Books in the University Library, Cambridge* (Cambridge, 1954), p. 65, no. 28. The discussion raised by the early Mainz editions may well have prompted the decision taken by Caxton: see N. Blake, *Caxton's Own Prose* (London, 1973), 97–101. Hartmann's presence on the Nuremberg mission to Bruges is mentioned by Hermann in Ep. 79, p. 177 of the edition cited. On the importance of the Bruges conference see my paper 'Diplomacy and the spread of printing', forthcoming in the *Proceedings of the International Short Title Catalogue Conference*, British Library Publications.

The situation changes dramatically in 1470, and for the next few years the Schedels' cultural contact with Italy took on a frantic intensity. It was the appearance of the first humanist Latin texts printed in Venice and Rome that touched the nerve. In an undated letter Hermann informed his cousin that a certain Armbauer had secured a copy of Pliny for him in Venice at a cost of 8 ducats, and that Johann Tocher could get another copy at the same price. In the same year he wrote of the arrangements he was making to buy the editions of Sweynheim and Pannartz in Rome: funds were being transferred through a Nuremberg merchant called Jerome Praun, whose brother Johann was running an office in Florence, with a subsidiary branch in Rome. I suspect it was through this contact that Hartmann secured the famous price-list of the nineteen editions that Bisop de Bussi and his associates had printed since 1468, which still survives in the Staatsbibliothek of Munich as our first record of this kind of advertising. The results are still impressive enough, though somewhat reduced by time and pilferage. The remains of the Schedel library include five early editions of Sweynheim and Pannartz, beginning with the Lactantius of 1468, and five of John and Windelin of Speyer. Jenson is represented by three volumes, the most notable being the *Scriptores rei rusticae* of 1472. The Pliny, which must have been John of Speyer's text of 1469, has disappeared along with an unknown number of its more valuable companions. But it is still clear that Schedel book-buying had gone into a high gear.[10]

This shift in tempo relates exactly to the shift in the business activity of their fellow countrymen. German printers flocked south in the late 1460s and early 1470s: Venice enjoyed something between a boom and a debauch. We can identify fifty-four different individuals who produced books there before 1481, of whom sixteen were German, twenty-one Italian, six French or Flemish, and the remaining ten stateless or nameless. Nine of the Germans appeared in Venice before 1474, so at first sight we are witnessing a steady drift towards Italian production. But the crude statistics are a little misleading for even in the later 1470s between a third and a half of the output – 260 editions out of 600 – was controlled by German syndicates. This explosive expansion contrasts strongly with the tentative experiment which had preceeded it, and confirms that the Schedels' burst of enthusiasm was more than an emotional seizure. Some eminent writers have used the figures to argue that the establishment of printing in Italy was a kind of 'second invention', a realization of the educative and commercial potential of the technique that Gutenberg had discovered. Gutenberg and Zell, Wennsler and Mentelin, we

10 *Briefwechsel*, Ep. 85, 87, 90, pp. 186–93. The text of Hartmann's price-list is printed in M. Miglio, *Giovanni Andrea Bussi: prefazioni alle edizioni di Sweynheym e Pannartz, prototipografi romani* (Milan, 1978), LVI–LVII. The figures quoted here are based on Stauber, *Schedeliche Bibliothek*, 154–225.

are told, were more interested in technology than in commerce, and in two cases at least their misfortunes seem to prove it. Not until their successors came in touch with the entrepreneurs and educational idealists of Renaissance Italy did the revolution gain momentum.[11] Though there must be a measure of sociological truth in this case, it has a crudity and nationalism about it that I find rather grating. It suggests a simple alliance of craftsmen on the one hand and bankers on the other which we do not find in many cases and which leaves the backwardness of Florence, where banking was far more sophisticated than in Venice, as a strange anomaly. I want to suggest instead that printing flourished in Venice because of the network of connections which we can dimly perceive in the Schedel correspondence; the city already had a committed core of German entrepreneurs, many of them thoroughly Italianized ; the printers could 'key into' their patronage systems like any other craftsmen or visitors.

Among the documents collected by Simonsfeld in his study of the *Fondaco dei Tedeschi* is a modest petition presented to the *Collegio* by the German merchants on 4 November 1472. It asks for special lodgings to be arranged for six 'young Germans of tender age, who have been sent to this city by their parents to learn the language and to study book-keeping (ut discant linguam nostram et abacum), as has been the custom for many years'. These apprentices were usually received 'in the homes of our nobles and citizens', and for some reason which we are not told this had proved impossible in 1472. No names are given, but we know from other sources that Georg and Jacob Fugger were among the young Germans in Venice at this time, and we have Giovanni Bellini's portrait of Georg to show us how eager they were to blend with the local scenery. It is clear that there was an informal but well-established system for training a bilingual merchant elite whose members, once they attained maturity, would form the core of the German community. All would be expected to spend years in Italy: some died there. It must have been a small, self-aware group, probably never more than a hundred or so strong and manned largely by the great dynasties of Fugger, Welser Imhof, Paumgartener and Stameler. Though its duties must have been mainly commercial, it is quite clear that they extended to promoting the interests of humbler travellers or craftsmen in much the same way as the wealthier students at Padua were expected to care for their fellow countrymen. And from 1470 the German craftsmen in Venice began to include an increasing number of printers.[12]

11 D. Marzi, 'I tipografi tedeschi in Italia durante il secolo XV', *Festschrift der Stadt Mainz zur Gutenberg Feier im Jahre 1900* (Mainz, 1900), 408–53: S. Samek Ludovici, 'Gutenberg e l'Italia', *Accademie e biblioteche d'Italia*, Anno XXXIII, no. 6 (1965), 429–53.

12 H. Simonfeld, *Der Fondaco dei Tedeschi in Venedig* (Stuttgart, 1887), I, 289–90. Information in R.

No one knows quite how the earliest Venetian printing-houses were financed. Though the large number of vellum copies illuminated with Agostini and Priuli arms may suggest that these merchant-banking families took an interest, there is no documentary evidence.[13] The Germans definitely became involved in distribution at once, and in underwriting at a very early stage. Johann Tocher, with whom Hermann Schedel had been in touch during 1470, was a young member of a Nuremberg firm which went bankrupt in February 1484.[14] Johann von Köln (better known as Giovanni da Cologna) appears as a financial underwriter to Windelin of Speyer at least two years before he took the company over in 1473. During the next few years the first great Venetian publishing consortium took shape. One of the components – that of Johann von Köln and his partners Manthen and Gaspar von Dinslaken – was entirely German. The other was more international, being headed by the French speculator Nicholas Jenson and backed by two Frankfurt merchants named Johann Rauchfass and Peter Ugelheimer, with more occasional support from the Strozzi bank of Florence. When the two merged in 1480 to found the company of Nicholas Jenson and Giovanni da Cologna, their books were already on sale everywhere from London to Naples and accounted for more than a third of those printed in Venice over the previous decade. Five out of the six partners were Germans.[15]

But what kind of Germans? Only Ugelheimer emerges as a solid personality, though there is enough circumstantial evidence to suggest that the others were hardly less Italianized. Peter had evidently been resident in Venice for some time when he entered partnership with Jenson, and since his share of the enterprise was valued at 1,000 ducats after his death we must assume that he had invested a considerable sum. He remained in Venice at least until 1484 when he appears, rather surprisingly, as host and mentor to Bernard von Breydenbach and his fellow pilgrims. The Latin phrase 'hospitio recepti' does not make it quite clear whether Peter ran a hostel or simply made himself useful in the broadest sense, but he was obviously an entrepreneur with many different commitments, who made it his function to ease the paths and lighten the pockets of any German visitors to Italy. His re-

Ehrenberg, *Capital and Finance in the Age of the Renaissance*–a Study of the Fuggers and Their Connections (London, 1928), 65, supplemented by G. Robertson, *Giovanni Bellini* (Oxford, 1968), 58. The portrait is dated 20 June, 1474.

13 L. Armstrong, *Renaissance Miniature Painters and Classical Imagery: The Master of the Putti and His Workshop* (London, 1981), 5–6. Two members of the Agostini family stood as executors to Jenson's will; C. Castellani, *La stampa in Venezia dalla sua origine alla morte di Aldo Manuzio seniore* (Trieste, 1973 edn), 89.

14 *Briefwechsel*, Ep. 85, p. 186. Simonsfeld, II, 79, 83.

15 The structure of this syndicate is clearly explained by L. Gerulaitis, *Printing and Publishing in Fifteenth-Century Venice* (London, 1976), 20–30, with full references to the documentary sources. The Strozzi interest can be traced in only three editions: E. de Roover, 'Per la storia dell' arte della stampa in Italia: come furono stampati a Venezia tre dei primi libri in volgare', *La Bibliofilia*, 55 (1953), 107–15.

lationship with Jenson had been close and cordial: the Frenchman's famous punches were bequeathed to him, and his widow remained an active force in Venetian publishing until the turn of the century. For some unknown reason Peter moved to Milan and died there some time in 1488. He was buried in Santa Maria delle Grazie, and left a collection of illuminated books whose few survivors still count as some of the most important achievements of the contemporary Italian school. Though the precise identity of the master (or masters) has been hotly disputed, it is clear that they were among the most skillful and daring followers of the classical school of Mantegna, and a subsequent owner of one of them called it 'the most beautiful book in the world'.[16]

Editors such as Jenson, Manthen, or Johann von Köln depended heavily on assistance from local Italian scholars such as Giorgio Merula, Benedetto Brugnolo and Alessandro Nevo, but this kind of dependence cannot be taken to prove close personal contact and common tastes. There is more to be learned of the immediate social and cultural environment of the early printers from their membership of Venetian *scuole*. Manthen belonged to those of S. Leonardo and Santa Barbara: his will made generous bequests to these and other Venetian charities, equalling the provisions set out for his own church of S. Maria von Gerresheim. Jenson belonged to the small but very active Scuola di S. Gerolamo, and to the much wealthier and more prestigious Scuola di S. Marco: Johann von Köln shared his membership of the first, and sent his son Peter along to the second. It is important to understand that, although certain *scuole* were restricted to particular nationalities, this was by no means a general rule, and even where it was applied, the *scuola* concerned had to work within the legal, ecclesiastical and artistic structure of Venice. On 31 August 1472 the German bale-binders of the Fondaco were granted permission to found their own association; they had to deal with the Dominicans of S. Giovanni e Paolo, and the contract which they signed bears a close resemblance to that which the heirs of Doge Nicolò Tron drew up with the Franciscans four years later. The proceedings were witnessed by two Venetian sculptors. But most *scuole* were prepared to admit men and women of different origin and background. They must have provided a superb forum for the discussion of either commercial or cultural topics, and there are strong reasons for believing that Jenson and Johann von Köln may have found valuable contacts among their brethren at S. Gerolamo. If they

16 E. Motta, 'Pamfilo Castaldi, Antonio Pianella, Pietro Ugleimer ed il vescovo d'Aleria', *Riv Stor It*, I (1884), 260–71. B. von Breydenbach, *Peregrinatio in Montem Syon* (Reuwich, Mainz, 1486) fol. 'Ibidem Venetiis apud Petrum Ugelheymer de Frankfortia veneciis commorantem hospitio fuimus recepti et ab eodem legaliter in omnibus atque humaniter tractati.' On the surviving books from his library see Armstrong, *Miniature Painters*, 84–5 nn. 5, 6, and G. Mariani-Canova, *La miniatura veneta del rinascimento* (Venice/Milan, 1969), 156.

needed advice on texts or their presentation they could have turned to the scholar/poet Raphael Zovenzoni, the artist Lazaro Bastiani, or the sculptor/architect Pietro Lombardo; if they needed help with finance or the distribution of their books, they could have turned to a dozen or more German bankers of the first rank, including Franz Paumgartner, Jerome Welser, Mark Tocher and Heinrich Stameler. And even if they needed neither help nor advice the regular functioning of the *scuola* in its masses and processions, its attention to its property and its maintenance of its equipment, was bound to accustom German members to the tastes and methods of their Italian environment.[17]

Unfortunately, reconstructing the world of the German community in Venice is rather like tracing the course of a major battle from the reminiscences of a random selection of private soldiers; we end with a cluster of brilliant but often contradictory vignettes and no general view of the action. Cases like those of Fugger and Ugelheimer alert us to the existence of a mercantile elite, Italianized by training and seeing the care of humbler or less permanent visitors from Germany as one of its duties – and opportunities. But we have no means of knowing how large this group was at any time, how much investment it controlled and what guidelines it followed in deciding who would receive such investment. We do not even know if those concerned thought of themselves as a group. An early sixteenth-century notarial act speaks with infuriating precision of the 'leather covered account book' of Johann von Köln and his partners, and we can be sure that one or two like it would show us just how the craftsmen worked with the bankers and whose capital lay behind the spectacular success of German printing in Italy.[18] For the moment, we have to be content with two generalizations. First, there was a very effective social and economic structure to encourage exchange of every kind between Venice and southern Germany well before printing appeared on the scene. Second, early Venetian printing profited enormously from the existence of that structure and contributed in its turn to an even more rapid and more profitable exchange both of information and of goods. Here again we can catch only tantalizing glimpses of the whole chart. We know from the correspondence of Aldus and Reuchlin that by 1500 so many Venetian books were being exported that they were actually cheaper in Germany than in Italy,[19] and almost every volume of canon law or theology

17 K. Haebler, 'Das Testament des Johann Manthen von Gerresheim', *La Bibliofilia*, 26 (1924), 1–9; M. Lowry, 'The social world of Nicholas Jenson and John of Cologne', *La Bibliofilia*, 83 (1981), 193–218. See Simonsfeld, 1, 287, for the contract signed by the *ligadori* and the Dominicans. On the contract between the Tron family and the Franciscans see my article '"Nel Beretin Covento": the Franciscans and the Venetian press (1474–78)', *La Bibliofilia*, 85 (1983), 30 and n. 11.

18 G. Ludwig, 'Contratti fra lo stampador Zuan da Cologna ed i suoi soci e inventario di una parte del loro magazzino', *Miscellanea di storia veneta*, 2nd series, 8 (1902), 60–2.

19 M. Lowry, *The World of Aldus Manutius* (Oxford, 179), 97 and n. 96.

that passes through my own hands seems to bear the library-mark of an imperial monastery. If we knew what facts like these represented in terms of figures, I think we would be ready to wave a last goodbye to the erudite but completely misconceived attempts which bibliographers have made to define the reading habits of different centres from the nature of the editions printed there. The book trade was always international.

The Schedel correspondence is one of the our most valuable sources of these fleeting insights into the world of the German community and its cultural experience of Italy, and one of its most valuable contributions comes from the mid-1470s, when the regular exchange of letters was drawing to its close. By this time the most fashionable intellectual pursuit in southern Germany seems to have been watching the mathematician Johann Müller or Regiomontanus in the hope of being able to forecast what he was going to forecast next. 'He wants everything he does to be secret, and has revealed his lair to few, if any', reported Hermann to his cousin in 1473. 'But I am ingratiating myself with his servants all the time. I shall soon get a sight of his work and when I do, I shall send you a copy.' Hartmann must have been interested, because Müller's background was in some ways similar to his own. He had studied under Chalcondylas at Padua during the 1460s, then passed from the Athenian's orbit into that of his still more illustrious patron, Cardinal Bessarion. Access to that famous library had aquainted him with the writings of Heron, Archimedes and Apollonius, besides bringing him into contact with aesthetic theorists like Alberti who were working on the correct proportions of the Latin epigraphical alphabet. Whatever the circumstances, Müller evidently reacted to the first Roman and Venetian editions with much the same excitement as the Schedels. By the summer of 1471 he was in Nuremberg, attracted by the excellence of the mathematical instruments available there and preparing to embark on a classical revival of his own, to complement what he had seen accomplished by Alberti and Bessarion in Italy. Establishing his own press, he announced a programme of mathematical editions in which his own calculations would appear alongside of the classical writers. A new calendar of the phases of sun and moon was in the press when Hermann Schedel wrote to his cousin; an 'almanac of the planets for many years ahead' would follow it; in the meantime the mysterious author had turned south again, 'to bring more books from Italy, as men think'. In fact Müller had been summoned to the papal court by Sixtus IV to advise on the reform of the ecclesiastical calendar, and he died there in 1476. The mathematical revival would find its sponsor not in Nuremberg but in Venice.[20]

20 *Briefwechsel*, Ep. 94, pp. 196–7. Comment in P. Rose, *The Italian Renaissance of Mathematics – Studies on Humanists and Mathematics from Petrarch to Galileo*, Travaux d'Humanisme et Renaissance, 145 (Geneva,

The means by which Erhard Ratholt became the intellectual heir of Regiomontanus are not quite clear, but since he vanishes from the Augsburg tax records in 1474 and reappears in Venice in 1476, it is more than likely that he spent the interval on the mathematical press-team in Nuremberg. The two versions of the *Calendarium* with which he opened his Venetian programme in 1476 prove that Ratholt had Müller's work immediately to hand. The *Almanach pro annis 1476–1506* followed in 1481 – rather more slowly, perhaps, than Schedel had hoped – while texts of Euclid, Hyginus, Ptolemy, Dionysius and Pomponius Mela provided the promised classical material. But the skill and speed with which Ratholt was able to tap into the existing circuits of Italian patronage and cater for their tastes is scarcely less impressive. His editions included dedications to Cardinal Battista Zen, Doge Zuane Mocenigo, the veteran ambassador Marcantonio Morosini and Duke Federigo of Urbino, on whose shelves printed books were supposed to be ashamed to show their faces. In fact Federigo, Morosini and Zen had all shown an interest in earlier Venetian editions, especially those of the Speyer brothers and Johann von Köln. This makes it less surprising to find Ratholt printing in a superbly cut roman type modelled on Jenson's or using Jenson's Gothic to advertise his own and Johann's editions in a single-sheet flier of 'books for sale in Venice'. Ratholt's woodcut decorations, with their rich arabesques of leaf and flower patterns, were the first successful attempt to mass-produce the classical ideas of Mantegna and the school of Paduan illuminators who had followed him. We also find epigraphical capitals similar in proportion to those designed by Feliciano and Alberti, used in certain printed texts by Sweynheim and Pannartz, and copied at an unknown date by Hartmann Schedel. Significantly, the Schedel library still contains eleven of Ratholt's volumes. Though we lack any documentary evidence, the output of the Ratholt press between 1476 and 1486 provides unchallengeable proof of the contacts which joined the members of the German community in Venice to one another, and all of them to the Italian environment in which they worked.[21]

It would take a bold man to disentangle the German from the Italian, the Latin from the Greek, the classical from the medieval in Regiomontanus' own thought. As we watch Radholt adapt that thought to Italian designs for Italian patrons, the process of fusion becomes still more complex; and if we

1975), 90–117; M. D. Feld, 'Constructed letters and illuminated texts: Regiomontanus, Leon Battista Alberti and the origins of roman type', *Harv Lbr B*, 28 (1980), 357–79.

21 G. Redgrave, *Erhard Ratholt and His Work in Venice*, Bibliographical Society Illustrated Monographs no. 1 (London, 1894). Morosini and Federigo da Montefeltro had a strong interest in the controversy between Merula and Galeotto in the early 1470s: see G. Merula, *In Librum De Homine Martii Galeotti* (undated, but probably Manthen and John of Cologne, BMC v, 231), fol. 61 r; Galeotti Martii Narniensis, *Refutatio Objectorum in Librum De Homine ad Illustrissimum Principem Federicum Urbini* (Jacobus Rubeus, 1476), fols a 2 r – 4 v.

take the process one stage further by investigating the effect produced by Ratholt's editions, we can recognize the futility of that distinction between Gothic and classical, Italian and German values which continues to distort much of our understanding. Among the texts printed by Ratholt in 1477 was a vigorous account of the recent campaigns of Pietro Mocenigo, who had died as doge early in the previous year. The work has been much admired by bibliographers and rather neglected by historians, which is a pity because it is a first-rate sea-story and an authoritative source. The writer was Coriolano Cipico (Latinized to Caepio), a Dalmatian galley-captain who had fought with Mocenigo in the naval sweeps of 1472 and 1473 that had sacked Smyrna, established a Venetian protectorate over Cyprus and done much to restore the republic's prestige after the disaster at Negroponte in 1470. Cipico stressed the speed and decisiveness of his old commander. The first book dealt with the success at Smyrna, which was owed to good intelligence and the clever planning of a surprise attack. Mocenigo had shown the same foresight over Cyprus, sending Cipico ahead to reconnoitre, then concentrating all Venetian units in the Aegean for a midwinter attack whose sheer unexpectedness overawed opposition and ended disorder. The book concluded with a description of the triumphal parade in St Nicholas' Square, Famagusta. Who could say now that the world no longer produced commanders like those of Greece and Rome, asked Cipico in his dedication?[22]

When the book appeared, the late hero's family was already planning a grandiose monument to his achievements. The necessary contract had been drawn up with the Dominicans of S. Giovanni e Paolo: Pietro Lombardo had been hired as sculptor, and was resident in the Palazzo Mocenigo; and since he was ready to begin on the church of Santa Maria dei Miracoli by 1481, we can assume that he worked fast.[23] Cipico's book offered the very themes he needed. So the tomb is dominated by a statue of Mocenigo fully armed, and in the vigilant posture implied in every chapter of his biography; beside him stand figures symbolizing the ancient warriors whom he had emulated, and below him reliefs of the labours of Hercules which he had equalled; while on his sarcophagus itself the sack of Smyrna and the triumph in Famagusta, climaxes of Cipico's first and final books, are chiselled side by side. Social historians of printing have long been fascinated by the artisan 'new reader' but they have rarely been able to give him a name.I suspect that the painter or sculptor in search of new and exotic themes was one of the first, and that the increasing number of secular or classical subjects which we find in High Renaissance art may be little more than a by-product of the easier lateral spread of ideas which printing had encouraged. Cipico's hero

22 Redgrave, no. 5, p. 28.

23 P. Paoletti, *L'architettura e la scultura del rinascimento in Venezia*, I (Venice, 1893), 190.

moved from biography to monumental sculpture in a year or so, and the commission which created his tomb involved a Dalmatian author, a German publisher, a Lombard sculptor and at least two Venetian patrons – Marcantonio Morosini for the biography, and Pietro's brother Zuane Mocenigo for the tomb. Should we speak of Italian capital and German techniques – of just of Renaissance culture?

When we speak of the cultural cross-fertilization of Venice and Nuremberg we are bound to focus – as I have done myself – on Dürer and Pirkheimer, Titian and Giorgione, the frescos of the new *Fondaco* and the Greek editions of Aldus. The achievements of that tremendous decade were exceptional, and they were described with exceptional clarity. But it is wrong to see them in isolation, for they were made possible by a well-tried complex of relationships and institutions. In sponsoring and advising his fellow-citizen, Pirkheimer was acting very much as Hermann Schedel had done towards his young cousin. In Venice itself were the entrepreneurs, comfortably straddling both cultures and dependent for their livelihood on introducing one to the other. Peter Ugelheimer's widow Marguerita was still active in Venetian publishing in 1499. And as final proof that the system was working very well, we should notice that Dürer had ended his apprenticeship in Michael Wolgemut's *atelier* just two years before Schedel's *Chronicle* was printed.

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