STATE CONTEXTS OF
RENAISSANCE MAPPING

31 · The Italian Map Trade, 1480–1650

David Woodward

The story of the Italian map trade mirrors the trends in general European economic history in the sixteenth century, of which one major force was a shift from a Mediterranean to an Atlantic economy. During the first part of the period covered by this chapter, from 1480 to 1570, the engravers, printers, and publishers of maps in Florence, Rome, and Venice dominated the printed map trade. More maps were printed in Italy during that period than in any other country in Europe.[1] After 1570, a period of stagnation set in, and the Venetian and Roman sellers could no longer compete with the trade in Antwerp and Amsterdam. This second period is characterized by the reuse of copperplates that had been introduced in the sixteenth century. The end date of our period, the midpoint of the seventeenth century, includes the *Arcano del mare* published in Florence but excludes the resurgence of original cartographic activity associated with Vincenzo Coronelli, whose work will be described in Volume 4 of *The History of Cartography.* A guide to the historiography and bibliography of the formative period covered by this chapter is provided in appendix 31.1, and a list of Roman and Venetian composite atlases is provided in appendix 31.2.

Florence

The roots of the map trade in the Italian states can be traced to Florence, where the enterprise centered around the painter and miniaturist Francesco Rosselli, probably the first entrepreneur to be successful in making an independent living from the print and map trade. Rosselli, a painter, illuminator, and engraver, was the son of a mason, Lorenzo, and younger brother of the painter Cosimo. Francesco worked more as an illuminator and engraver (he probably collaborated with Sandro Botticelli), including during a period between 1476 and 1480 when he worked at the court of Matthias Corvinus in Hungary while Cosimo looked after the business. We know from a tax document prepared by his brother that Francesco was in Hungary in 1480; in 1482 he bought a farmstead in Ripoli near Florence.[2] His pictorial activity dates from about 1470. How he became interested in specializing in map engraving we do not know, but by 1508, when he

attended a lecture in Venice, he was listed among the audience as "Franciscus Rosellus florentinus Cosmographus." Marino Sanuto also lauded him as a cosmographer in an epigram in his *Diaries*. Several important maps are known from his hand from at least the 1490s.[3] But a recent study may put his cartographic activity back a decade earlier: Boorsch has surmised, on stylistic grounds, that

Abbreviations used in this chapter include: Newberry for the Newberry Library, Chicago.

1. For a useful map comparing the centers of printed world map production in Europe in 1472–1600 with those in 1600–1700, showing the early dominance of the Italian states, see J. B. Harley, review of *The Mapping of the World: Early Printed World Maps 1472–1700,* by Rodney Shirley, *Imago Mundi* 39 (1987): 105–10, illustration on 108. The distribution of map centers has been more finely tuned in chapter 23 in this volume.

2. Cesare de Seta, "The Urban Structure of Naples: Utopia and Reality," in *The Renaissance from Brunelleschi to Michelangelo: The Representation of Architecture,* ed. Henry A. Millon and Vittorio Magnago Lampugnani (Milan: Bompiani, 1994), 349–71, esp. 365–66.

3. The standard book of Rosselli's engraving œuvre, including a useful biographical introduction, is Mark J. Zucker, *Early Italian Masters,* The Illustrated Bartsch 24, Commentary, 4 pts. (New York: Abaris Books, 1993–2000), pt. 2, 1–109. Unfortunately, although he praises Rosselli's cartographic work, Zucker illustrates his point with no maps from Rosselli's hand except the surviving sheet of the view of Florence in copperplate. The article on Rosselli as cartographer by Roberto Almagià, "On the Cartographic Work of Francesco Rosselli," *Imago Mundi* 8 (1951): 27–34, is now showing its datedness in bibliographical and chronological details. Recent summaries of Rosselli's cartographic work, with full bibliographies, are found in Tony Campbell, *The Earliest Printed Maps, 1472–1500* (London: British Library, 1987), 70–78; David Landau and Peter W. Parshall, *The Renaissance Print, 1470–1550* (New Haven: Yale University Press, 1994), 12–13; Lilian Armstrong, "Benedetto Bordon, *Miniator,* and Cartography in Early Sixteenth-Century Venice," *Imago Mundi* 48 (1996): 65–92; Suzanne Boorsch, "Francesco Rosselli," in *Cosimo Rosselli: Painter of the Sistine Chapel,* ed. Arthur R. Blumenthal (Winter Park, Fla.: Cornell Fine Arts Museum, Rollins College, 2001), 208–11; and David Woodward, *Maps as Prints in the Italian Renaissance: Makers, Distributors & Consumers* (London: British Library, 1996), in Italian, *Cartografia a stampa nell'Italia del rinascimento: Produttori, distributori e destinatari* (Milan: Sylvestre Bonnard, 2002). See also David Woodward, "Starting with the Map: The Rosselli Map of the World, ca. 1508," in *Plantejaments i objectius d'una història universal de la cartografia = Approaches and Challenges in a Worldwide History of Cartography,* by David Woodward, Catherine Delano-Smith, and Cordell D. K. Lee (Barcelona: Institut Cartogràfic de Catalunya, 2001), 71–90.

Rosselli may have engraved the maps for Francesco Berlinghieri's edition of Ptolemy's *Geography,* published in 1482.[4] This stylistic evidence is compelling and may imply that Rosselli returned to Florence from Hungary before 1482, unless he completed the commission by 1476, before his departure to the Corvinus court.

In a period for which archival evidence about the map and print trade is disappointingly scant, the survival of an inventory of Rosselli's shop is a high point indeed. Francesco's son Alessandro inherited the business, and on Alessandro's death in 1527 the contents of the shop were listed as part of Alessandro's assets to be paid for the upkeep of his son, who had become a ward of the court. The document survives in the archives of the Magistrato dei pupilli (Office of Wards) entrusted with such matters.[5] The inventory is divided into three parts: impressions in stock of prints and maps (including maps of Hungary, France, Crete, Italy, and India; Lombardy; and city views of Pisa, Constantinople, Rome, and Florence); printer's furniture and books; and woodblocks and metal plates (copper, brass, and pewter). Prices are given for the impressions in lire and soldi. The large sizes average about 3 lire each, the medium about 1 lira, and the small about 3–7 soldi. The most expensive item is a colored navigation chart (7 lire). Globes and their paraphernalia are much in evidence (usually described as "appamondo in palla") and one, apparently for teaching, was part of the printer's furnishings.

For the plates, weighing a total of 475 pounds, a figure was provided presumably for their scrap value, which, using figures from 1613, would have totaled about 600 lire.[6] The plates included those for a six-sheet map of Italy, possibly the map referred to by Almagià in 1934,[7] and a "appamondo a mantellino," probably the two-sheet world map by Giovanni Matteo Contarini on a conic projection (shaped like a small cloak) that Rosselli had signed. One entry refers to "1° appamondo picholo d'un foglio chomune." *Foglio comune* referred to the smallest size of paper (about 23 × 38 cm), which sold for between 3 and 7 soldi according to the inventory. The plate listed is probably Rosselli's small oval map of the world made in about 1508, and if so, the plate remained in stock for at least twenty years. More tantalizing are the plates for large maps from which no impressions apparently survive: a large navigation chart in eight sheets, a large world map in twelve sheets, and another one in sixteen sheets. The twelve-sheet map sounds suspiciously like either of the woodcut world maps by Martin Waldseemüller (1507 and 1516), but it is listed in the "plates" section of the inventory. As to the world map in sixteen sheets, we can only speculate.

Rosselli's predominant use of metal engraving is not surprising. Its origin is usually linked to Florence, where the goldsmith's art became highly developed in the

fifteenth century.[8] More important for Rosselli's trade was the geographical interests of his patrons in a city that had been the center of geographical information in the Italian Peninsula since Paolo dal Pozzo Toscanelli. Books on geography and travel were among the most popular.[9] It may be significant that the only edition of Ptolemy's *Geography* published in Florence was foremost a work of literature, not science, in the humanist tradition—a translation by the priest Francesco Berlinghieri in terza rima (in which the first and third lines of a triplet rhyme with the middle line of the preceding triplet), accompanied by maps that were perhaps printed independent of and before the text (they are printed on different paper).[10]

A fascinating window on what was available to the print collector of the late fifteenth and early sixteenth centuries is afforded by the manuscript inventory of the collection of Ferdinand Columbus, preserved in the Biblioteca Colombina in Seville. A list of pre-1539 prints, which includes many maps, and the study that accompanies it sheds considerable light on the patterns of distribution and rate of attrition of maps in this early period of printmaking.[11]

4. Suzanne Boorsch, "The Case for Francesco Rosselli as the Engraver of Berlinghieri's *Geographia*," *Imago Mundi* 56 (2004): 152–69.

5. The Rosselli inventory was first published by Jodoco Del Badia in "La bottega di Alessandro di Francesco Rosselli merciaio e stampatore, (1525)," *Miscellanea fiorentina di erudizione e di storia* 2 (1894): 24–30. See also Christian Hülsen, "Die alte Ansicht von Florenz im Kgl. Kupferstichkabinett und ihr Vorbild," *Jahrbuch der Königlich Preuszischen Kunstsammlungen* 35 (1914): 90–102, and Arthur Mayger Hind, *Early Italian Engraving: A Critical Catalogue with Complete Reproduction of All the Prints Described,* 7 vols. (London: For M. Knoedler, 1938–48), 1:304–9. An earlier version of the inventory recently came to light: Florence, Archivio di Stato, Magistrato dei Pupilli (avanti il Principato 189), fols. 735r–43v. See Sebastiano Gentile, ed., *Firenze e la scoperta dell'America: Umanesimo e geografia nel '400 Fiorentino* (Florence: Olschki, 1992), 247–50. It is not substantially different from the other version, although a complete collation has yet to be published.

6. Landau and Parshall, *Renaissance Print,* 24. The scrap value of copper in 1613 is listed at 22 baiocchi (.22 scudi) per pound. See Francesca Consagra, "The De Rossi Family Print Publishing Shop: A Study in the History of the Print Industry in Seventeenth-Century Rome" (Ph.D. diss., Johns Hopkins University, 1992).

7. Roberto Almagià, "Una grande carta d'Italia del secolo XVI finora sconosciuta," *Bibliofilia* 36 (1934): 125–36.

8. John Goldsmith Phillips, *Early Florentine Designers and Engravers: A Comparative Analysis of Early Florentine Nielli, Intarsias, Drawings and Copperplate Engravings* (Cambridge: Harvard University Press, 1955).

9. Roberto Almagià, "Il primato di Firenze negli studi geografici durante i secoli XV e XVI," *Atti della Società Italiana per il Progresso delle Scienze* 18 (1929): 60–80; Gentile, *Firenze;* and Leonardas Vytautas Gerulaitis, *Printing and Publishing in Fifteenth-Century Venice* (Chicago: American Library Association, 1976).

10. Paolo Veneziani, "Vicende tipografiche della *Geografia* di Francesco Berlinghieri," *Bibliofilia* 84 (1982): 195–208.

11. Mark P. McDonald, "The Print Collection of Ferdinand Columbus," *Print Quarterly* 17 (2000): 43–46, and idem, *The Print Collection of Ferdinand Columbus (1488–1539): A Renaissance Collector in*

Despite such a promising start in Florence, the map engraving trade was soon overtaken by first the Roman and then the Venetian trades in prints, maps, and books, until they too were superseded by the atlas makers in the Low Countries in the last quarter of the sixteenth century.

ROME

In Rome, an edition of Ptolemy's *Geography* and its reprint appeared in the fifteenth century (1478 and 1490); the earliest intense period of printmaking independent of the book trade in the city was between 1508 and 1527, when Marcantonio Raimondi and a group of engravers and printmakers made a living copying Raphael's paintings for a popular market.[12] During the sack of Rome in 1527 and 1528, the population of the city was reduced from fifty-five thousand to thirty-two thousand.[13] Few businesses survived. Marco Dente, Raimondi's pupil, died in the disaster, and Raimondi fled back to Bologna.

Antonio Salamanca, one of the mainstays of the Roman book and print trade, had already taken up residence in the city in 1505.[14] The hypothesis that he may have been a Jewish *converso* from Spain is still open to question, for his official name was Martini. What we do know is that by 1527 he had a shop employing eight people.[15] The Tramezzino brothers, Michele and Francesco, were not as fortunate; they fled to Venice, but Francesco returned in 1528 to set up shop.

ANTONIO LAFRERI AND HIS ATLAS

After the sack, an influx of foreign immigrants enlivened the print trade as the market exploded for prints of antiquarian subjects and the results of archaeological findings. Maps of ancient and modern Rome, architectural views, and prints of statues, monuments, and ruins were in great demand.

The most influential of these immigrant engravers and publishers was Antonio Lafreri (Antoine Lafréry), who arrived from Franche-Comtois in 1544 and set up a partnership with Salamanca that lasted from 1553 (when Salamanca was seventy-five) until Salamanca's death in 1562.[16] The Lafreri-Salamanca collaboration flourished so intensely that it started a dynasty of map and print publishers in Rome as plates were handed down through generations (fig. 31.1). It was a cutthroat business, and when Lafreri died without a will in 1577, his assets were divided between engravers Claudio Duchetti (Lafreri's nephew) and Stefano Duchetti (Claudio's nephew) (Claude and Étienne Duchet), a decision bitterly questioned by rival shopowner Lorenzo de la Vaccherie. Indeed, much of our knowledge of these engravers comes from lawsuits and criminal proceedings.[17] A third of the

estate, consisting mostly of sequestered plates, was held back until the suit was settled. When Claudio Duchetti died in 1585, Giacomo Gherardi carried on the shop in the Via di Parione, where his inventory shows over a hundred copperplates, but he was the last in the tradition of printing Lafreri's plates in that location. A portion of the stock of plates certainly went to Giovanni Orlandi, who had a print shop in the Pasquino and usually added the imprint "Ioannes Orlandi formis romae 1602." This imprint is also found on plates originating from Vincenzo Luchini, Hendrik van Schoel, and other Roman publishers. Another portion of the Lafreri-Duchetti plates went to Pietro de' Nobili (Petrus de Nobilibus), including the rare second state of the Lafreri title page, which bears his imprint.[18] The possessiveness with which printsellers guarded their plates is illustrated by the short-lived (one-

Seville, 2 vols. (London: British Museum, 2004), especially the chapter by Peter Barber, "The Maps, Town-Views and Historical Prints in the Columbus Inventory," 1:246–62. See also Christopher Baker, Caroline Elam, and Genevieve Warwick, eds., *Collecting Prints and Drawings in Europe, c. 1500–1750* (Aldershot: Ashgate, 2003).

12. The prime source for archival material relating to the Roman map trade is Franz (Francesco) Ehrle, *Roma prima di Sisto V: La pianta di Roma Du Pérac-Lafréry del 1577 riprodotta dall'esemplare esistente nel Museo Britannico. Contributo alla storia del commercio delle stampe a Roma nel secolo 16 e 17* (Rome: Danesi, 1908). For more recent general works, see Paolo Bellini, "Stampatori e mercanti di stampe in Italia nei secoli XVI e XVII," *I Quaderni del Conoscitore di Stampe* 26 (1975): 19–66, esp. 19–25; Maria Antonietta Bonaventura, "L'industria e il commercio delle incisioni nella Roma del '500," *Studi Romani: Rivista Bimestrale dell'Istituto di Studi Romani* 8 (1960): 430–36; Maria Raffaella Caroselli, "Commercio librario a Roma nel secolo XV," *Economia e Storia* 25 (1978): 221–37; and Jacques Kuhnmünch, "Le commerce de la gravure à Paris et à Rome au XVIIe siècle," *Nouvelles de l'Estampe* 55 (1981): 6–17.

13. Judith Hook, *The Sack of Rome, 1527* (London: Macmillan, 1972), 34 and 177.

14. In the papers Salamanca filed for citizenship in Rome in 1560, he stated that he had already been resident in the city for fifty-five years. See Valeria Pagani, "Documents on Antonio Salamanca," *Print Quarterly* 17 (2000): 148–55.

15. Maria Cristina Misiti, "Antonio Salamanca: Qualche chiarimento biografico alla luce di un'indagine sulla presenza spagnola a Roma nel '500," in *La stampa in Italia nel Cinquecento*, 2 vols., ed. Marco Santoro (Rome: Bulzoni Editore, 1992), 1:545–63, and Landau and Parschall, *Renaissance Print*, 302.

16. Ehrle, *Roma prima di Sisto V*, 11–15; Antonino Bertolotti, *Artisti subalpini in Roma nei secoli XV, XVI e XVII: Ricerche e studi negli archivi romani* (Mantua: Mondovì, 1884); idem, *Artisti francesi in Roma nei secoli XV, XVI e XVII: Ricerche e studi negli archivi romani* (Mantua: G. Mondovi, 1886); and F. Roland, "Un Franc-Comtois éditeur et marchand d'estampes à Rome au XVIe siècle: Antoine Lafréry (1512–1577)," *Mémoires de la Société d'Émulation du Doubs* 5 (1910): 320–78.

17. Gian Ludovico Masetti Zannini, "Rivalità e lavoro di incisori nelle botteghe Lafréry-Duchet e de la Vacherie," in *Les fondations nationales dans la Rome pontificale* (Rome: École Française de Rome, 1981), 547–66.

18. George H. Beans, "Some Notes from the Tall Tree Library," *Imago Mundi* 7 (1950): 89–92, esp. 92.
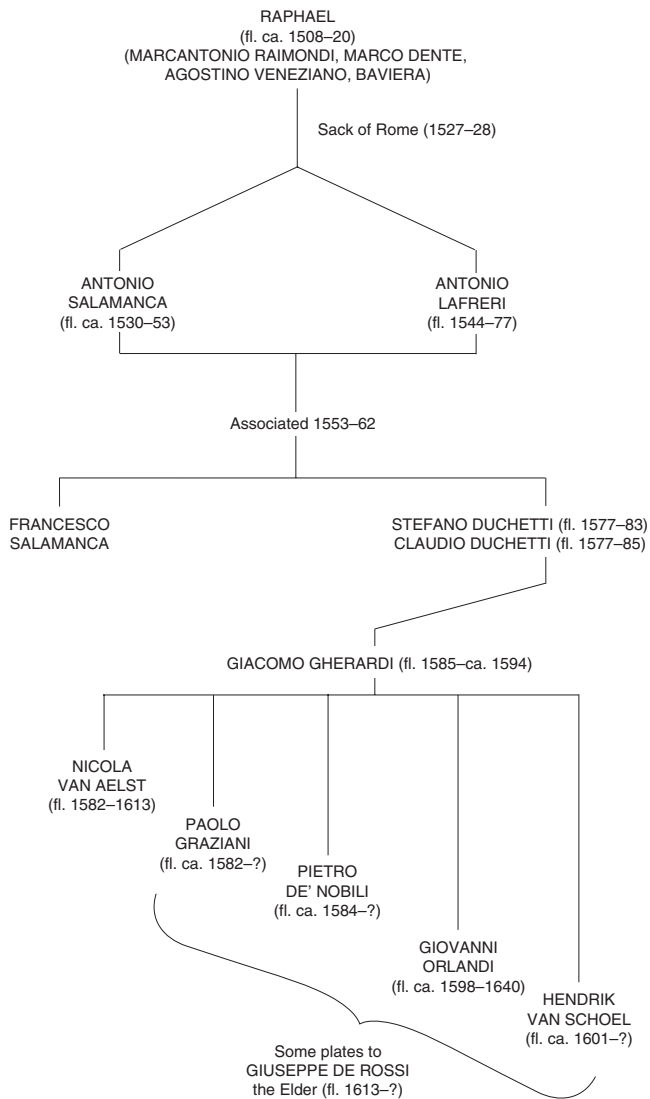
FIG. 31.1. CHART OF THE LAFRERI-SALAMANCA COL-LABORATION. Flourish dates are given in parentheses.

FIG. 31.2. AREA OF PRINTMAKING ACTIVITY IN SIX-TEENTH-CENTURY ROME.

Lafreri's shop in the Via di Parione was a place to meet and discuss the latest ideas and to add to one's collection.[20] Marc-Antoine Muret, who taught for twenty years in Rome and was a well-known antiquarian, wrote in 1572: "I talked with Lafreri these past few days. He sent

month) agreement made between de' Nobili and Petrus Spranghers on 6 November 1584 to share their stock. Written into the inventory record was the stipulation that neither would be allowed to sleep alone in the shop at night. On 17 December the partnership was dissolved, but the resulting inventory provides a rich source of map titles that had passed to de' Nobili.[19]

The printmakers were concentrated in the *rione* (district) of Parione (the parish of San Lorenzo in Damaso), particularly the Via del Pellegrino and the Campo de' Fiori (fig. 31.2). This area near the Piazza Navona was populated by a rich clientele served by bankers, goldsmiths, printsellers, and merchants of devotional objects. According to an eyewitness of the early 1550s, Tramezzino and Salamanca's shops in Rome were haunts of archaeologists and antiquarians interested in ancient Rome, and
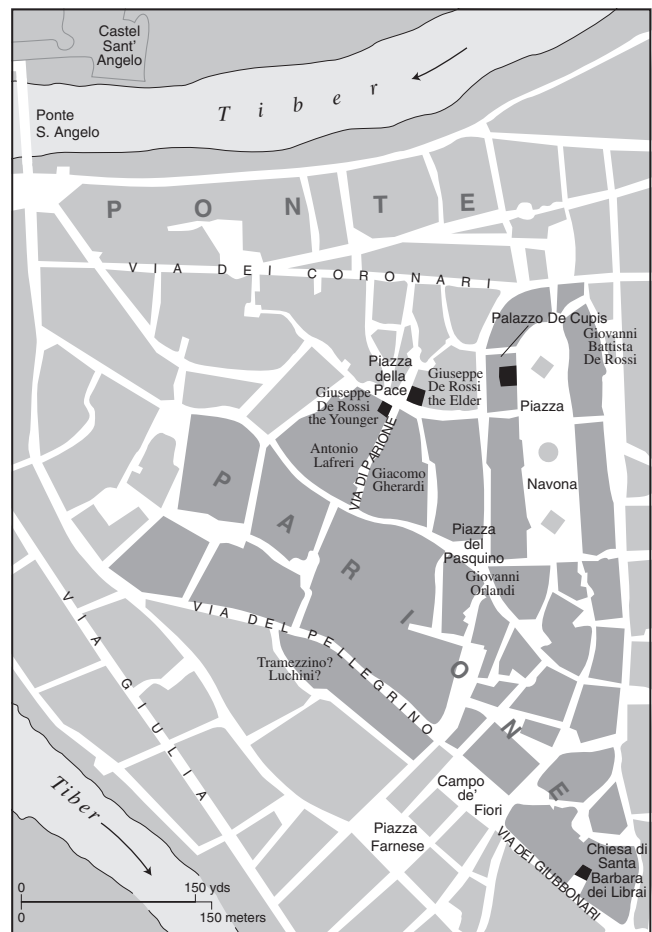
19. Evelyn Lincoln, *The Invention of the Italian Renaissance Printmaker* (New Haven: Yale University Press, 2000). The agreements are transcribed in full on pp. 185–88.

20. Consagra, "De Rossi Family," and idem, "De Rossi and Falda: A Successful Collaboration in the Print Industry of Seventeenth-Century Rome," in *The Craft of Art: Originality and Industry in the Italian Renaissance and Baroque Workshop,* ed. Andrew Ladis and Carolyn Wood (Athens: University of Georgia Press, 1995), 187–203. Consagra's archival work on the De Rossi genealogy largely supersedes that done by Ehrle, *Roma prima di Sisto V;* Leandro Ozzola, "Gli editori di stampe a Roma nei sec. XVI e XVII," *Repertorium für Kunstwissenschaft* 33 (1910): 400–411; Thomas Ashby, "Antiquae Statuae Urbis Romae," *Papers of the British School at Rome* 9 (1920): 107–58; and authors of relevant entries in the *Dizionario biografico degli Italiani* (Rome: Istituto della Enciclopedia Italiana, 1960–). See also Roberto Almagià, "Nota su alcuni incisori e stampatori veneti e romani di carte geografiche," in *Monumenta cartographica Vaticana,* 4 vols. (Rome: Biblioteca Apostolica Vaticana, 1944–55), 2:115–20.

me today everything he has done in a year and a half."[21] The area still remains a center of the antiquarian print and book trade.

Lafreri gathered his prints into three bound selections for collectors: a book of portraits, the *Illustrium virorum;* an album of architectural plans and views of ancient and modern Rome, the *Speculum Romanae magnificentiae;* and the *Geografia,* containing maps and topographical views. Translated, a fuller title of the last reads "Geography: Modern maps of most of the world by various authors collected and put in Ptolemy's order with views of many cities and forts from various regions. Published from copperplates with care and diligence in Rome." "Ptolemy's order" meant the approximate order of the maps in Ptolemy's *Geography* (maps of the world, then the continents, then Europe, Asia, and Africa), but beyond this allusion the maps were intended to be distinctly "modern."[22]

Lafreri issued a catalog, published in 1573, listing almost five hundred items that allow us to glimpse his inventory. Although maps and views account for only just over a fifth of the total, they were listed first in the catalog, according to Ptolemy's order in his *Geography*. Not included by Ptolemy, of course, the New World forms a separate category but is represented by only three maps—maps of Cuba and Hispaniola, "Peru" (i.e., South America), and "Nova Franza" (i.e., North America)—all maps that had previously been sold by Paolo Forlani in Venice and for which the plates were probably brought to Rome by Claudio Duchetti when he left Venice in 1570.[23]

THE DE ROSSI FAMILY AND ITS HEIRS

In the seventeenth century, Roman map and print publishing was dominated by the De Rossi (De Rubeis) family. The complicated links between the various members of the De Rossi family have been sorted out by Consagra using archival evidence, and this section relies heavily on her work (fig. 31.3).[24] Four distinct print shops in the Piazza Navona or in the vicinity, with at least five active players during the century, all bore distinct lineage to the patriarch of the family, Giuseppe De Rossi the Elder (fig. 31.2). From 1617 to 1628, he hired his two nephews, Giuseppe the Younger and Giovanni Battista, as apprentices in his shop in the *rione* of Campo Marzio. On Easter Sunday of 1628, Giuseppe the Elder released them from their indenture, allowing them to open a shop on the south side of the Piazza della Pace. In 1630, Giuseppe the Elder moved from Campo Marzio to a house owned by the church of Santa Maria dell'Anima on the east side of the Piazza della Pace. During the 1630s, two shops in the piazza with the name Giuseppe De Rossi were thus in operation. Giuseppe the Elder's stock included plates from Adamo Scultori, the partner of Antonio Lafreri, which
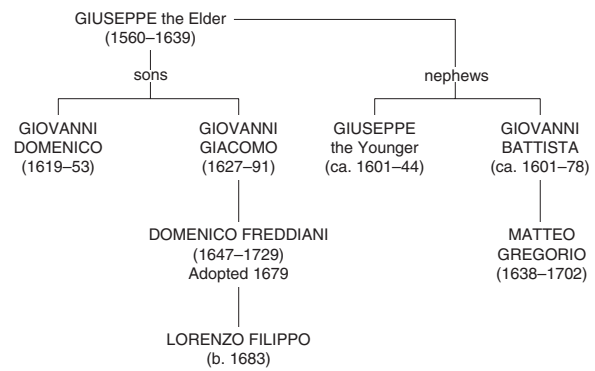

FIG. 31.3. GENEALOGICAL CHART OF THE DE ROSSI FAMILY. Birth and death dates are given in parentheses.

he gained through his association with Adamo's son Cesare, Antonio Tempesta, and Philippe Thomassin. He signed three plates issued by Lafreri as "G. RO. FO" for "Giuseppe de Rossi Formis." But less than 2 percent of Giuseppe the Elder's stock included topographical views and maps of places other than Rome, which is surprising indeed for a print shop situated in such an important center of trade and pilgrimage. However, Giuseppe did own the plates for a terrestrial and celestial globe by Henricus Hondius, sixteen items related to the siege of Malta, and Thomassin's recut version of the 1569 printed sea chart of the Mediterranean based on the work of Diogo Homem,[25] among several other views of cities, provinces, and islands.

Giuseppe the Younger, nephew of Giuseppe the Elder, was a printseller of more modest means. At his death, he left only 663 copperplates and only a few luxury household items. But he owned plates by such famous engravers as Giorgio Ghisi, Antonio Tempesta, and Cherubino Alberti that attracted print collectors such as Cassiano dal Pozzo. Nevertheless, his stock failed to keep

21. Fabia Borroni Salvadori, *Carte, piante e stampe storiche delle raccolte lafreriane della Biblioteca Nazionale di Firenze* (Rome: Istituto Poligrafico e Zecca dello Stato, 1980), xxxvii.

22. For references relating to the *Speculum Romanae magnificentiae,* see Woodward, *Maps as Prints,* 112–13 n. 8.

23. Antonio Lafreri, *Indice delle tavole moderne di geografia della maggior parte del mondo di diversi auttor* (Rome: Antoine Lafréry, ca. 1573); unique copy in Florence, Biblioteca Marucelliana. See also Borroni Salvadori, who, in *Carte, piante e stampe,* xxxix, correctly points out that the pamphlet cannot have been published in 1572, as has frequently been estimated, because it contains a map that was published in 1573.

24. Consagra, "De Rossi Family."

25. David Woodward, *The Maps and Prints of Paolo Forlani: A Descriptive Bibliography* (Chicago: Newberry Library, 1990), 46–47 (map 81.01). For a catalog of Thomassin's prints, see Edmond Bruwaert, *La vie et les oeuvres de Philippe Thomassin graveur troyen, 1562–1622* (Troyes: P. Nouel and J.-L. Paton, 1914). Bruwaert does not mention the map of the Mediterranean, but does describe a plan of Spoleto dated 1615 (p. 89, item 302).

up with a changing taste in the subjects for prints in the mid-seventeenth century. His stock was heavily weighted toward religious subjects (almost three-quarters of it), and, similar to the stock of his uncle Giuseppe the Elder, less toward the topographical prints and maps that had made Lafreri so successful in the previous century.

In 1635, Giovanni Battista left his brother Giuseppe the Younger's shop to open his own shop in the Palazzo De Cupis on the northwest side of the Piazza Navona, thereby establishing three print shops with the name De Rossi within a few hundred yards of each other. The Palazzo De Cupis was home to several booksellers and printsellers. Giovanni Battista's importance faded rapidly when faced with competition from Giuseppe the Elder's two printselling sons.

According to the terms of Giuseppe the Elder's will, his estate was to be divided equally among his four sons (Giovanni Domenico, Girolamo, Giovanni Giacomo, and Filippo) in 1648, when the first three had come of age. According to the shop inventory of 22 August 1648, the stock consisted of about three thousand copperplates and twenty thousand prints.[26] The brothers could buy out each other's stock of plates, which Giovanni Domenico and Giovanni Giacomo did.

From 1648 to 1649, Giovanni Domenico and Giovanni Giacomo shared a print shop on the corner of the Via della Pace and the Via di Parione. They used different imprints to distinguish their businesses. Giovanni Domenico used "all insignia di Parigi" to reflect the considerable stock from Parisian print shops that he traded. In 1649, Giovanni Domenico moved to his own shop in the building to which Giuseppe Battista had moved in 1635, the Palazzo De Cupis. There Giovanni Domenico operated until August 1653, when he and his wife died of a "malady" within six hours of each other, childless and intestate. The inventory drawn up shortly after his death (on 4 September 1653) reveals that he had expanded his stock of geographical and topographical plates at least sixfold, including 40 plates for an edition of Ptolemy's *Geography,* reflecting the new demand for such subjects. He had increased his collection of plates of ancient and modern Rome from 12 to 125 in five years. In the same period, his printed sheets increased elevenfold (to almost 56,000), all stored in huge poplar and chestnut credenzas and bookcases. They included thousands of imported prints from Paris, Flanders, Venice, Milan, Bologna, and Naples. His books, print sets, and series increased fourteenfold (to almost 3,000). Above one of the bookcases was "a large cosmographical map glued on canvas with its hanging rods."[27]

Giovanni Giacomo De Rossi emerged as the dominant printseller in seventeenth-century Rome. In 1648, at the age of twenty-one, he launched his career by issuing the twelve-sheet map of Rome by Antonio Tempesta and

FIG. 31.4. ONE OF THE TWELVE PLATES OF ANTIQUE ROME BY ETIENNE DU PÉRAC.
Istituto Nazionale per la Grafica, Rome (neg. no. 1857). By concession of the Ministero per i Beni e le Attività Culturali.

several prints targeted at the educated tourist and collector. In the following year, he published the *View of the Bridge in Pisa* by Antonio Francesco Lucini, the engraver of Robert Dudley's *Arcano del mare.* On Giovanni Domenico's death in 1653, Giovanni Giacomo acquired his stock of plates for under 700 scudi, thus consolidating the stock of his eldest brother and father and establishing himself as the sole bearer of the De Rossi family legacy of copperplates. Among Giovanni Giacomo's cartographic subjects were the twelve plates of antique Rome by Etienne Du Pérac (fig. 31.4) and the twelve plates of Giorgio Widman's reengraving of Willem Jansz. Blaeu's maps of the four continents, including two plates that had been missing during Giovanni Domenico's lifetime. His success was sealed when he received two privileges from Pope Alexander VII, one for a lavish series of portraits of the cardinals, and one for a book of views of Rome by Giovanni Battista

26. Consagra, "De Rossi Family," 482–532.
27. Consagra, "De Rossi Family," 362–63.

Falda entitled *Il nuovo teatro delle fabriche et edificii in prospettiva di Roma moderna* (1665). Giovanni Giacomo's involvement in this project was as far more than a distributor; he had discovered the fourteen-year-old Falda in Bernini's workshop and carefully coached him as an impresario with the help of tutors in etching and perspective drawing. The result was so successful that the pope granted Giovanni Giacomo a privilege covering all his publications from 1664 to 1674, a virtual monopoly of the Roman print trade. In 1680, he published the *Tavola generale dell'Italia,* originally compiled by Nicholas Sanson and corrected and edited by Michele Antonio Baudrand. From 1693, he was succeeded by his adopted son Domenico Freddiani De Rossi and Domenico's son Lorenzo Filippo. In 1738, the plates owned by the De Rossi publishing firm were acquired by Pope Clement XII for 40,000 scudi and passed to what today is the Calcografia Nazionale in Rome, where the majority of them still survive.[28]

The location of the De Rossi print shops in the Piazza della Pace and the Piazza Navona took full advantage of the traffic to the churches of San Biagio della Fossa and Santa Maria della Pace, as well as the hospice of Santa Maria dell'Anima. The area was considered a trading center of Rome and housed the Roman Mint, which employed metalworkers with skills similar to those of the engravers necessary for the print trade. It was also close to the Via dei Coronari, a major pilgrimage route that got its name from the *coronai,* or rosarysellers, who catered to pilgrims. Printsellers, often called *santari,* provided the pilgrims with religious images and maps and with views of Rome and its churches. The market was huge. During the Holy Year 1650, seven hundred thousand pilgrims visited Rome, seventy thousand of them during Holy Week.

The seventeenth-century Roman map and print trade turned out to be very different from the trade practiced by Lafreri in the previous century. Between 1616 and 1648, Giuseppe the Elder and his initial heirs showed far less interest in acquiring plates of views and maps of the sort that had made up Lafreri's stock. Perhaps the high cost of keeping them current discouraged the printmakers, although this does not seem to have deterred mapsellers in other countries. After 1648, a significant change took place. By the time of the 1653 inventory of Giovanni Domenico's shop, the percentage of plates with geographical subjects (maps and topographical prints) had increased from 2 to 9 percent. These plates passed to Giovanni Giacomo, who further exploited the increased taste for collecting maps and increased his stock of geographical plates by 600 percent. An interest in city views and a trend toward decorating houses with topographical prints and maps certainly contributed to the demand, as did Pope Alexander VII's striking interest in

supporting Giovanni Giacomo with unprecedented protection in the form of privileges.

Another difference lay in the increased trading of prints with foreign publishers and the building up of much larger inventories. In the mid-sixteenth century, printing on demand from small *botteghe* (workshops) seemed to be the rule. By the mid-seventeenth century, print publishers were including foreign prints in their stock, particularly from France and Flanders, and Giovanni Domenico in particular supplied foreign printsellers with bulk shipments in return. Such trading reaped great benefits, as the rarity (and thus the price) of foreign prints increased with distance from the market and printsellers could charge a much higher price to cover the risks and expenses of transport.[29] The network of foreign contacts further increased the status of the local printseller and further justified the higher cost of his goods.

VENICE

In Venice, map publishing appears to have started in collaboration with humanists and book publishers in the early sixteenth century. Benedetto Bordone (Bordon), a miniaturist by profession, worked there.[30] Francesco Rosselli was there from 1504 to 1508, and he may have been involved in producing an aborted edition of Ptolemy's *Geography,* for which Paolo da Canal made an application to the Venetian senate for a privilege to publish in 1506.[31] Rosselli's pair of small world maps may have been intended for a pocket edition of the *Geography,* but plans for it were cut short by Paolo's death in 1508 and the competition afforded by the magnificent woodcut edition of the *Geography* edited by Bernardo Silvano and printed by Jacobus Pentius de Leucho in Venice in 1511. Or they might have served as the opening maps in a planned *isolario,* or book of islands, a genre that had by then become popular in Italy. Bordone was the author of such an *isolario,* published in Venice in 1528, and supporting evidence for this connection is also found in a close woodcut copy of Rosselli's oval world map that occurs in the 1532 edition of Bartolommeo dalli Sonetti's *isolario,* also published in Venice.

An argument against the potential inclusion of Rosselli's small world maps in an *isolario* is that they were engraved in copper, which was unusual given the Vene-

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28. For a full discussion of these plates, see Anna Grelle Iusco, ed., *Indice delle stampe intagliate in rame a bulino, e in acqua forte esistenti nella stamparia* [sic] *di Lorenzo Filippo de' Rossi appresso Santa Maria della Pace in Roma, MDCCXXXV: Contributo alla storia di una stamperia romana* (Rome: Artemide, 1996).

29. Consagra, "De Rossi Family," 375–76.

30. Armstrong, "Benedetto Bordon."

31. Armstrong, "Benedetto Bordon," 87 n. 51, provides the text and a translation of Paolo da Canal's application for a privilege.

tian taste in prints at the time. Indeed, the predominance of the woodcut in early sixteenth-century Venice is quite striking. Jacopo de' Barbari's huge six-sheet view of Venice (1500) is the obvious example.[32] Reasons may lie not only in the strong cultural affinities of Venice with cities north of the Alps, but also in the common use of the woodcut to prepare popular editions of master paintings. In Rome, Raimondi had rendered the art of Raphael (Raffaello Sanzio) in copper; in Venice, the preference for prints of masters such as Titian called for woodcuts.

GIOVANNI ANDREA VALVASSORE AND MATTEO PAGANO

The early Venetian masters of map engraving in the 1530s, Giovanni Andrea Valvassore and Matteo Pagano, not only were closely tied to the book trade; they also worked in woodcut. Valvassore (Vavassore), called Guadagnino, was born in Telgate (between Bergamo and Brescia) and began as an artist and blockcutter, perhaps as early as 1510. In a testament of 1523, he describes himself as an "incisor

FIG. 31.5. AREA OF PRINTMAKING ACTIVITY IN SIXTEENTH-CENTURY VENICE.

figurarum."[33] From 1530, Valvassore is listed as a member of a painters' guild that admitted artists and artisans. In 1530, he is listed as a book printer, and by 1537, his imprint includes his brothers. From 1544 until 1572, it bears only Giovanni Andrea's name.[34] It is difficult to fix the beginnings of Valvassore's geographic subjects, for about half his maps—nine out of nineteen—are undated. But in about 1515 he issued a colored woodcut of the battle of Marignano (plate 25), more than fifteen years before his next dated map, a map of Spain. Valvassore's maps are extremely rare: none survives in more than four impressions.

Waste prints of Valvassore woodcut maps of Italy and the world were used as paper for two of the eight sheets of Matteo Pagano's woodcut print *Procession of the Doge of Venice* (Venice: M. Pagano, [ca. 1561]).[35] This suggests a possible link between the workshops of Valvassore and Pagano, underlines the expense of paper, and perhaps shows that maps were regarded as more expendable than other prints.

Pagano was active as a wood engraver and publisher from 1538 to 1562 in the Frezzaria, one of two parallel streets (the other was the Merzaria) that became the printmakers' quarter between the Piazza San Marco and the Rialto (fig. 31.5). These streets became a cultural rendezvous for booksellers and their clients.[36]

As with Valvassore's maps, Pagano's are now extremely rare; none survives in more than three impressions. Although the style and content of maps by the two en-
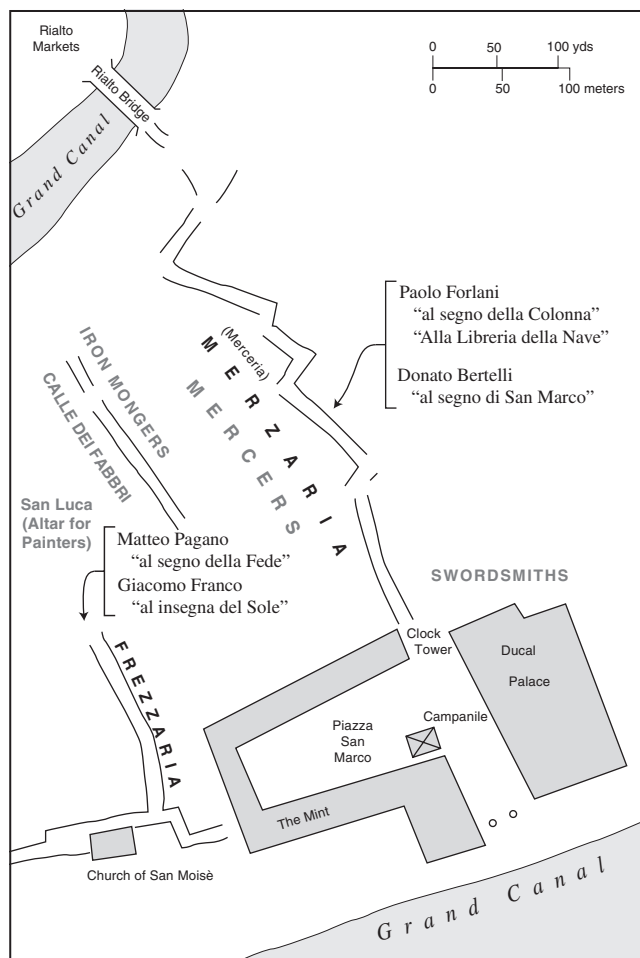
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32. Juergen Schulz, "Jacopo de' Barbari's View of Venice: Map Making, City Views, and Moralized Geography before the Year 1500," *Art Bulletin* 60 (1978): 425–74.

33. I follow the form Valvassore because of the predominance of that spelling found in four family testaments described by Anne Markham Schulz in "Giovanni Andrea Valvassore and His Family in Four Unpublished Testaments," in *Artes Atque Humaniora: Studia Stanislao Mossakowski Sexagenerio dicata* (Warsaw: Instytut Sztuki Polskiej Akademii Nauk, 1998), 117–25, esp. 118. Schulz fixes the date of Valvassore's death before 31 May 1572, when his will was opened.

34. Charles Ephroussi, "Zoan Andrea et ses homonymes," *Gazette des Beaux-Arts,* 3d ser., 5 (1890): 401–15, and 6 (1891): 225–44. A list of Valvassore's maps, in need of updating, is in Leo Bagrow, *Giovanni Andreas di Vavassore: A Venetian Cartographer of the 16th Century. A Descriptive List of His Maps* (Jenkintown, Pa.: George H. Beans Library, 1939). See also George H. Beans, "Some Notes from the Tall Tree Library: Vavassore and Pagano," *Imago Mundi* 5 (1948): 73, and idem, "A Note from the Tall Tree Library," *Imago Mundi* 10 (1953): 14. Additions to Valvassore's œuvre are found in Rodney W. Shirley, "Something Old, Something New from Paris and Nancy: Yet More Early and Rare Italiana, including 14 Maps by Pagano or Vavassore," *IMCoS Journal* 67 (1996): 32–36.

35. British Museum, Prints and Drawings, Italian Woodcuts, Portfolio 3, Case 57.

36. Leo Bagrow, *Matheo Pagano: A Venetian Cartographer of the 16th Century. A Descriptive List of His Maps* (Jenkintown, Pa.: George H. Beans Library, 1940); Beans, "Vavassore and Pagano," 73; and Marcel Destombes, "La grande carte d'Europe de Zuan Domenico Zorzi (1545) et l'activité cartographique de Matteo Pagano à Venise de 1538 à 1565," in *Studia z dziejów geografii i kartografii / Études d'histoire de*

QLA·VERA·DESCRIPTIONE·DE·TVTO·EL·PIAMONTE·Q

FIG. 31.6. GIACOMO GASTALDI'S MAP OF THE PIED-MONT, 1555, ENGRAVED BY MATTEO PAGANO. Photograph courtesy of the Universiteitsbibliotheek Leiden (002-02-009).

gravers were similar, Pagano seems to have been less of a copyist than Valvassore. His association with the leading sixteenth-century Italian cosmographer Giacomo Gastaldi was also much stronger; he engraved Gastaldi's map of the Piedmont (1555), which now exists in only one impression (fig. 31.6). Pagano also cut the small woodcut maps (probably compiled by Gastaldi) that illustrate Giovanni Battista Ramusio's *Navigazioni et viaggi,* and he published Gastaldi's brief booklet that accompanied Gastaldi's 1561 world map.[37] A 1565 edition of this booklet was published by Francesco de Tomaso di Salò, who took over Pagano's establishment after his death and over whose imprint Pagano's fine reduction of de' Barbari's view of Venice was published.

GIACOMO GASTALDI

For a cartographer whose compilation skills have been ranked with those of Mercator and Ortelius, mysteriously few biographical details are known about Giacomo Gastaldi (Castaldi, Castaldo, Gastaldo).[38] He was from

one of the two towns named Villafranca in Piemonte, probably the larger one near Saluzzo, but no documents relating to his birth date and early life have surfaced. He lived and worked in Venice from 1539, when he applied for a privilege from the Venetian senate to publish a perpetual calendar, to his death in October 1566. He attained great fame there, becoming a member of the prestigious Accademia Veneziana, in the company of such scholars as Alessandro Zorzi, Livio Sanuto, Girolamo Ruscelli (the publisher of the 1561 edition of Ptolemy), Paolo Ramusio (the brother of Giovanni Battista Ramusio), and Francesco Sansovino.[39]

From 1551 until his death, Gastaldi was commissioned many times by the Savi sopra la Laguna to draw maps related to problems regarding regulation of the fresh and salt waters of the Venetian lagoon, sometimes as assistant to Cristoforo Sabbadino, *proto* or director of the Magistratura alle Acque. Upon Sabbadino's death, Gastaldi was proposed as his successor, but did not obtain a sufficient number of votes, probably because he was not a native Venetian.[40]

The senate bestowed on Gastaldi the title of cosmographer to the Republic of Venice in recognition of his extensive contributions to geography. The first map he signed was the remarkably mature *La Spaña* (1544)

la géographie et de la cartographie, ed. Józef Babicz (Warsaw: Polska Akademia Nauk, 1973), 115–29.

37. Giacomo Gastaldi, *La universale descrittione del mondo, descritta da Giacomo de' Castaldi piamontese* (Venice: Matteo Pagano, 1561), fols. A3 and A4. A photographic facsimile of this edition is found in Massimo Minella, *Il mondo ritrovato: Le tavole sudamericane di Giacomo Gastaldi* (Genoa: Compagnia dei Librai, 1993), 95–105.

38. Early work on Gastaldi includes Antonio Manno and Vincenzo Promis, "Notizie di Jacopo Gastaldi: Cartografo piemontese del secolo XVI," *Atti della Reale Accademia delle Scienze* 16 (1881): 5–30; Stefano Grande, *Notizie sulla vita e sulle opere di Giacomo Gastaldi cosmografo piemontese del secolo XVI* (Turin: Carlo Clausen, 1902); idem, *Le carte d'America di Giacomo Gastaldi: Contributo alla storia della cartografia del secolo XVI* (Turin: Carlo Clausen, 1905); Mario Baratta, "Ricerche intorno a Giacomo Gastaldi," *Rivista Geografica Italiana* 21 (1914): 117–36 and 373–79; and Giuseppe Caraci, "Note critiche sui mappamondi gastaldini," *Rivista Geografica Italiana* 43 (1936): 120–37 and 202–23. More recent general work includes the unpublished conference paper by Romain Rainero, "Observations sur l'activité cartographique de Giacomo Gastaldi (Venise XVIᵉ siècle)" (paper presented at the Ninth International Conference on the History of Cartography, Pisa/Florence/Rome, Italy, June 1981); Robert W. Karrow, *Mapmakers of the Sixteenth Century and Their Maps: Bio-Bibliographies of the Cartographers of Abraham Ortelius, 1570* (Chicago: Speculum Orbis Press for the Newberry Library, 1993), 216–49; and ongoing work by Douglas Sims (New York).

39. Stefano Grande, "Le relazioni geografiche fra P. Bembo, G. Fracastoro, G. B. Ramusio e G. Gastaldi," *Memorie della Società Geografica Italiana* 12 (1905): 93–197, and Denis E. Cosgrove, "Mapping New Worlds: Culture and Cartography in Sixteenth-Century Venice," *Imago Mundi* 44 (1992): 65–89.

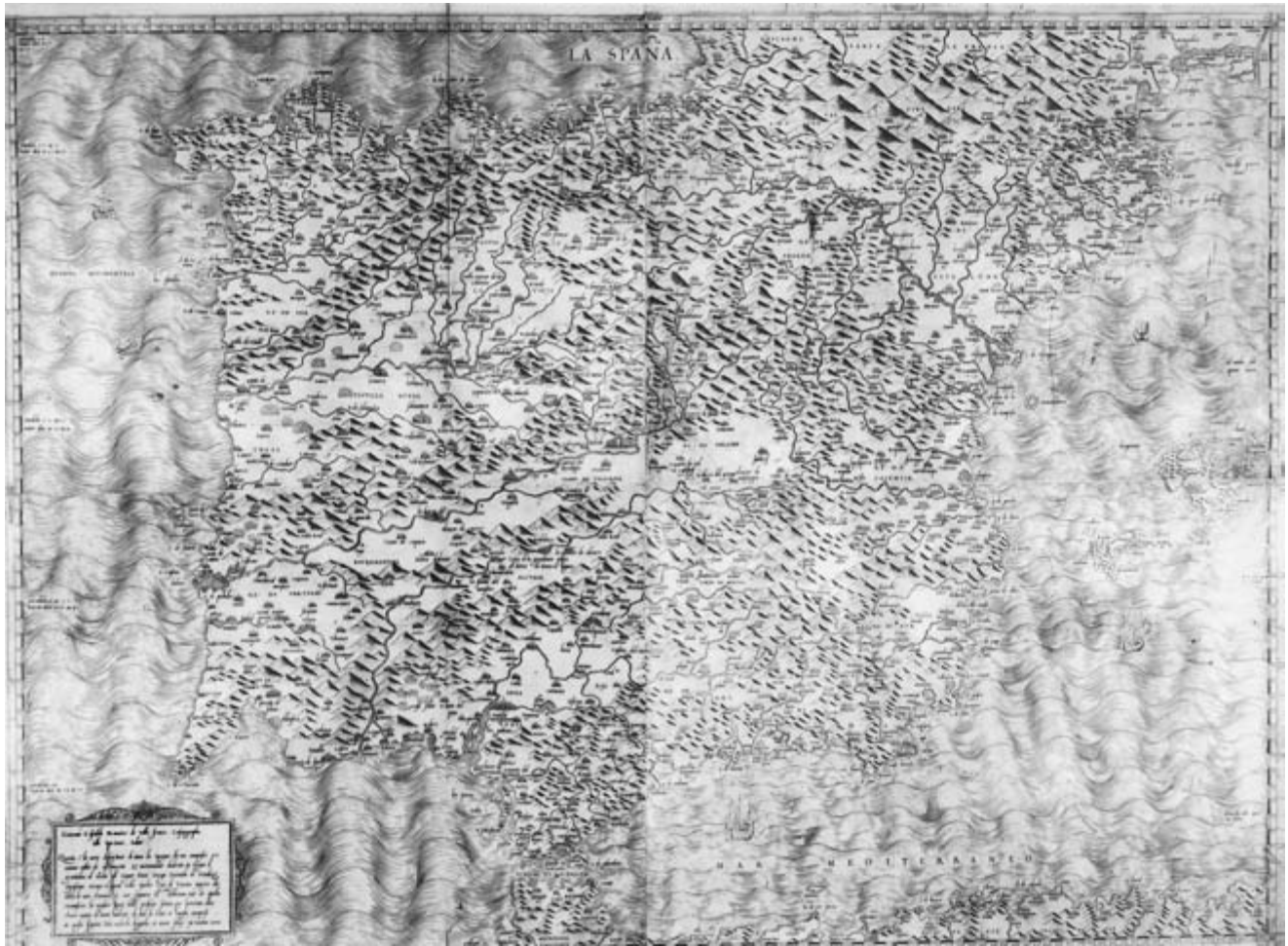40. For more on Sabbadino, see chapter 35 in this volume.

FIG. 31.7. GIACOMO GASTALDI'S *LA SPAÑA,* 1544.

Size of the original: 67 × 92 cm. Photograph courtesy of the Newberry (Novacco 6F 24).

(fig. 31.7), but he had obviously already been working hard on geographical matters, because he produced a large map of Sicily in 1545; his influential world map on an oval projection, the *Universale,* appeared only two years later; and the first compact edition of Ptolemy's *Geography* appeared two years after that, but he had worked on it at least as early as 1542 (the date on the map of Germany).

The sources of the geographical information in the 1546 *Universale* were various. For South Asia and Africa, the resemblance to Sebastian Cabot's oval world map of 1544 is quite remarkable. In North America we can detect similarities with the manuscript world maps in atlases of Battista Agnese, especially for the overall shape of the continent and the northwest coast of America; the evidence of their similar projection and central meridian confirms this view. Gastaldi created at least three similar maps from the *Universale:* the *Universale Novo* that formed part of the 1548 edition of Ptolemy's *Geography;* the *Dell'universale,* a two-sheet woodcut published by

Matteo Pagano about 1550; and the multisheet *Cosmographia universalis* of about 1561, to which we will shortly refer.[41]

The 1548 edition of Ptolemy's *Geography* was the first to appear in the vernacular, but it was clearly inspired by Sebastian Münster's 1540 and 1545 Latin editions, for the text is preceded by an "Aggiunta di Sebastiano Mu[n]stero," the three opening sections of the "Appendix geographica" in the Basel *Geography.* It is not clear what role Gastaldi had in the whole work, for Giovanni Battista Pederzano (or Pedrezano), the publisher, and Pietro Andrea Mattioli of Siena, the translator from the Latin, must claim some of the credit.[42] The idea for the edition may have been Pederzano's, though no evidence

41. For a list of Gastaldi's printed maps, see Karrow, *Mapmakers of the Sixteenth Century,* 216–49.

42. Conor Fahy, "The Venetian Ptolemy of 1548," in *The Italian Book, 1465–1800: Studies Presented to Dennis E. Rhodes on His 70th Birthday,* ed. Denis V. Reidy (London: British Library, 1993), 89–115.

FIG. 31.8. GIACOMO GASTALDI'S *ITALIA,* 1561.

Size of the original: 41 × 63 cm. Photograph courtesy of the Newberry (Novacco 4F 201).

survives of a contract between him and Gastaldi for drawing the sixty maps (twenty-six Ptolemaic and thirty-four modern), for which Gastaldi was certainly responsible. The method of printing the copperplates was ingenious: four copperplates were locked together in a frame and printed at the same time.

In the 1550s, in addition to a number of small regional maps, Gastaldi produced the maps for the three volumes of the *Navigationi et viaggi* of Giovanni Battista Ramusio. Ramusio was the major link between the information provided by the explorers and the Italian academic publishing scene. A diplomat in the Venetian service, he was also secretary of the Council of Ten, the ruling body of the Venetian Republic. His compilation of voyages and travels (1550, 1554, and 1556)—the text for the fourth volume was destroyed by fire—was to be the model for the later work of Richard Hakluyt. He saw the need to collect and publish the travel accounts of recent centuries, which he called the greatest achievement of his time.[43]

In the late 1550s and early 1560s, Gastaldi compiled several influential maps. The map of Italy was already finished on 29 July 1559, when Gastaldi received a privilege for it from the Venetian senate, along with other

maps by him, including maps of the three parts of Asia and of Greece and Lombardy. We do not know why Gastaldi waited two years to print the map after receiving the privilege, particularly because the representation of Italy on his map of Europe (1560) is essentially the same.[44] His *Italia* (1561) is an excellent example of the judicious merging of information from portolan charts with regional maps, more successful in the Po Valley than in the central states or the south (fig. 31.8).[45]

From the viewpoint of originality of sources, Gastaldi's most successful printed regional map was his large map of Lombardy, for which he had received a privilege in 1559. "Lombardy" is perhaps a misnomer, for the map

43. Marica Milanesi, "Nuovo mondo e terra incognita in margine alla mostra 'The Italians and the Creation of America,' " *Rivista Geografica Italiana* 90 (1983): 81–92, and her edition of Ramusio's travels, Giovanni Battista Ramusio, *Navigazioni e viaggi,* 4 vols., ed. Marica Milanesi (Turin: G. Einaudi, 1978–83).

44. Roberto Almagià, *Monumenta Italiae cartographica* (Florence: Istituto Geografico Militare, 1929), 26.

45. Renato Biasutti, "Il 'Disegno della Geografia moderna' dell'Italia di Giacomo Gastaldi (1561)," *Memorie Geografiche* 2, no. 4 (1908): 5–66, and Almagià, *Monumenta Italiae,* 26–27 and pl. XXVIII.
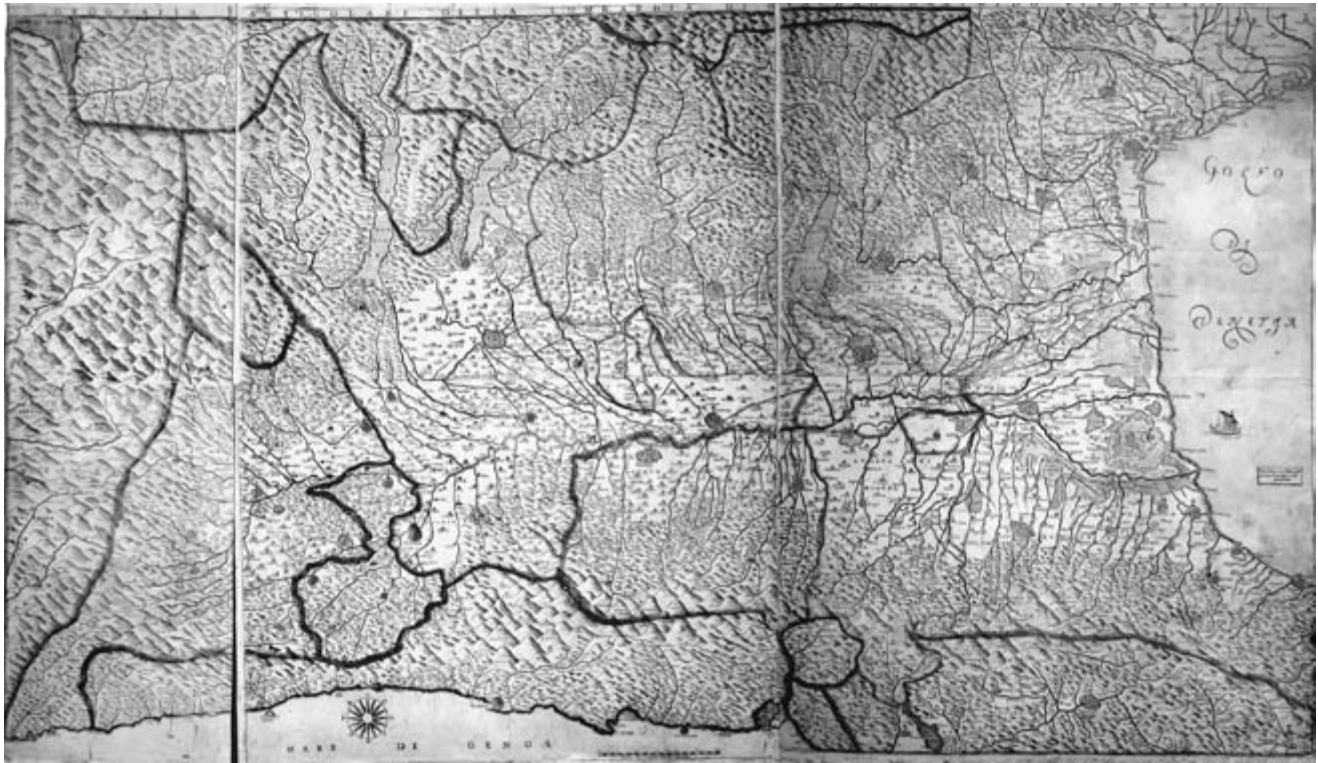
FIG. 31.9. GIACOMO GASTALDI'S MAP OF LOMBARDY. This is an early seventeenth-century edition of the 1559 original.

Photograph courtesy of the Newberry (4F304).

includes all of northern Italy, from Lake Geneva to Venice and from Bolzano to Florence (fig. 31.9). Gastaldi's original does not survive; perhaps it was a larger woodcut version, more subject to damage and less likely to be included in bound atlases.[46]

The three-part map of Asia (1561), also mentioned in the 1559 privilege, was used as the basis for at least three other maps: Abraham Ortelius's 1567 map of Asia; the map of Asia by Gerard de Jode, 1578; and the globe gores of about 1570 possibly by the Sanuto brothers, Giulio and Livio.[47] Likewise, Gastaldi's 1564 eight-sheet map of Africa was the source for the Sanuto globe gores and maps of the continent designed to be part of a four-continent set.[48] For example, the twelve-sheet wall map of Africa contained in the so-called Camocio Atlas is a direct copy.[49]

The undated ten-sheet woodcut map of the world with the title *Cosmographia universalis* (fig. 31.10) bears the unusual form of Gastald's name "Jacopo a Castaldio." The provenance of this enigmatic map is not altogether clear. Pullé reproduced a sheet from it in 1932, indicating it was in the library of the marchesi Panciatichi in Florence, but made no comment on the map.[50] It was seen by Henri Vignaud in the same collection and seen again very briefly—but long enough to make a description—by Almagià in 1939, possibly in Trieste.[51] It disappeared until the 1970s, when it was offered for sale to several institutions; it was finally purchased by the BL in 1978.[52]

The enigma arises because the map matches, to some extent but not completely, the description of a large world

46. Almagià, *Monumenta Italiae*, 28–29 and pl. XXXI.

47. R. V. Tooley, "Maps in Italian Atlases of the Sixteenth Century, Being a Comparative List of the Italian Maps Issued by Lafreri, Forlani, Duchetti, Bertelli and Others, Found in Atlases," *Imago Mundi* 3 (1939): 12–47 (maps 48, 54, and 61). On the gores, see Rodney W. Shirley, *The Mapping of the World: Early Printed World Maps 1472–1700*, 4th ed. (Riverside, Conn.: Early World, 2001), 151–55 (no. 129), and David Woodward, *The Holzheimer Venetian Globe Gores of the Sixteenth Century* (Madison, Wisc.: Juniper, 1987).

48. Tooley, "Maps in Italian Atlases," 20, and Renato Biasutti, "La carta dell'Africa di G. Gastaldi (1545–1564) e lo sviluppo della cartografia africana nei sec. XVI e XVII," *Bollettino della Reale Società Geografica Italiana* 9 (1920): 327–46 and 387–436.

49. Minneapolis, James Ford Bell Library, Comocio Atlas, B1560 fCa. See David Woodward, *"The Description of the Four Parts of the World": Giovanni Francesco Comocio's Wall Maps*, James Ford Bell Lectures, no. 34 (Minneapolis: Associates of the James Ford Bell Library, 1997), full text at <http://www.bell.lib.umn.edu/wood.html>.

50. Francesco L. Pullé, "La cartografia antica dell'India: Parte III, Il secolo delle scoperte," *Studi Italiani di Filologia Indo-Iranica* 10 (1932): 1–182, esp. pl. 8.

51. Roberto Almagià, "Intorno ad un grande mappamondo perduto di Giacomo Gastaldi (1561)," *Bibliofilia* 41 (1939): 259–66, and Henri Vignaud, "Une ancienne carte inconnue de l'Amérique, la première où figure le futur Detroit de Behring," *Journal des Américanistes de Paris* 1 (1921): 1–9.

52. Nico Israel and Meijer Elte, *Catalogue 20: Important Old Books on Various Subjects* (Amsterdam: Nico Israel, 1978).
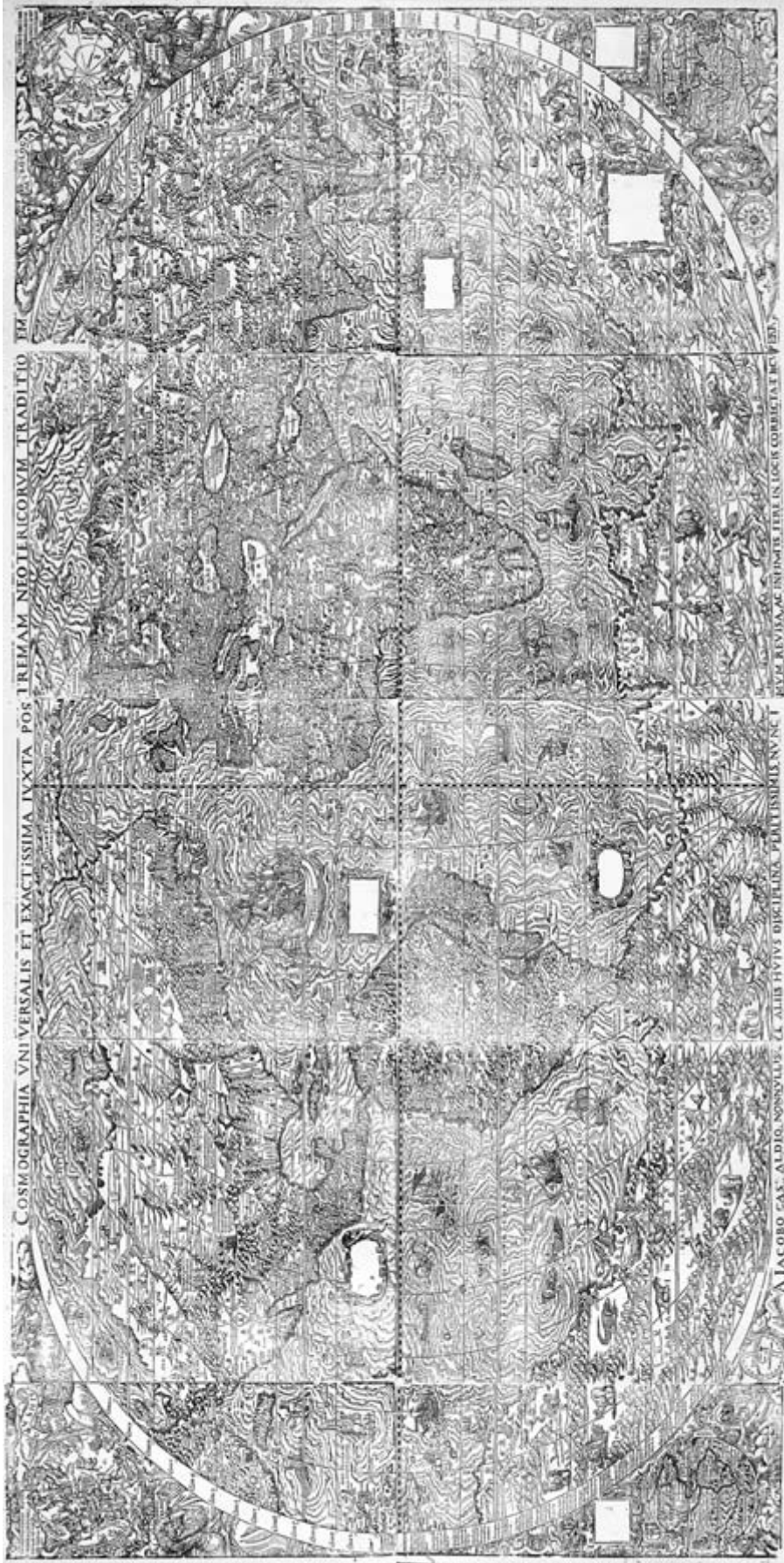
FIG. 31.10. GIACOMO GASTALDI'S *COSMOGRAPHIA UNIVERSALIS*. Map in 10 sheets.

Size of the original: ca. 91 × 181 cm. Photograph courtesy of the BL (Maps R.17.a.9).

map in Gastaldi's libretto written to accompany such a map.[53] On 30 July 1561, the Council of Ten had approved the publication in Venice of Gastaldi's libretto, "the one which accompanies the mapamondo of Jac° piamontese di Gastaldi." Note that the permission was only for the libretto, although the map was identified and ascribed to Gastaldi. About two weeks later (18 August 1561), Matteo Pagano applied for a privilege for the map itself, claiming that he had, with much effort, time, and expense, drawn and engraved a "mapamondo" in twelve sheets and was asking the senate to grant a privilege for fifteen years to prevent copying in wood or in copper.[54]

Almagià first pointed out several features of Pagano's map that suggest it was not the map referred to in the booklet, but a close copy of it.[55] Pagano's petition was for a map of twelve sheets, while the BL map has ten (actually nine, but one was clearly intended to be divided into two). Pagano's printer's mark (clasped hands) is not on the map, and it was unusual for him to sign the blocks. Gastaldi did not normally collaborate with other cartographers, yet the title clearly states that it was a collaboration. The form of his name (Jacopo a Castaldio) is unusual. No text type is found in the white spaces clearly intended for it, suggesting that this was either a proof before letters or a very late pull of the blocks after the type had dropped out. The latter scenario is favored, because the paper does not bear the watermark commonly used in Venice in the 1560s. The booklet says that the boundaries between the continents are clearly marked, but they are not on the map. The booklet mentions twenty-four meridians and twenty-four parallels (twelve in the northern hemisphere and twelve in the southern), but the map has only twelve parallels. These points raise the possibility that there was a very similar (but earlier) twelve-sheet map, made in 1561 with Gastaldi's proper name on it, that would repay a search.

Despite these bibliographical complications, the content of Pagano's map provides a missing link for several other maps produced in Venice in the 1560s and 1570s. The outline and names on the South American portion are strikingly similar to the much more common copperplate *Descrittione di tutto il Perù* engraved by Paolo Forlani.[56] In Forlani's unusual map of both Americas (1574), both outlines and names are clearly copied from Gastaldi's world map, although the representation of New Guinea is from somewhere else.[57] Forlani's credibility is thrown into question here, because he laboriously explains on the map of the Americas that a certain Don Diego Hermano de Toledo, a gentleman of "nobilissime qualità," gave him a drawing of the New World. Even if "Don Diego" had been carrying around a tracing of part of Gastaldi's decade-old world map in Venice, which seems absurd, it is most unlikely that Forlani would have been unaware of where it came from, considering his close familiarity with Gastaldi.[58]

Evidence of direct copying is also found on the so-called Sanuto globe. The 1561 map was apparently used for the northern coast of Asia and much of its interior down to the extent covered by Gastaldi's separate maps of South Asia. Both the "Mar di Tartaria" and the "Mar Cataimo" in the Arctic Ocean are similarly named on the gores, and the legend "Here is found lapis lazuli" is reproduced. The North American Arctic coast and the northern Pacific islands also stem partly from the 1561 world map. So, too, do the toponymy, coastlines, and interior detail for North America, including the blind copying by the compiler of the Sanuto gores, in the exact same position, of the word fragments NOVA FRAN, from which the last two letters, ZA were excluded.[59]

Gastaldi's booklet accompanying the world map is also of interest because it suggests that he was working on a set of maps of the four continents—Europe, Asia, Africa, and the New World—which he calls *parti*. "I will describe them [the names of various features in the provinces] with the *parti*, which I will bring to light *alla giornata* [any day], particularly those that aren't in the *Mapamondo,* where some general things are included as a result of its small scale. But in the maps of the continents, which will come out, there will be every detail."[60] In the 1565 edition of the booklet, the maps were still due *alla giornata.* The lost 1568 Latin edition of the libretto is of interest because, dated two years after Gastaldi's death, it might indicate whether the maps had indeed come out.[61]

Although no set of maps matching Gastaldi's allusion is known, evidence suggests that they existed. The Camocio Atlas is an example of an atlas in which the four continental maps were bound together: its contemporary manuscript title is "Quatro parte del mondo." The maps were all printed from copperplates originally engraved in Venice, probably in the 1570s, although the atlas was probably not bound until around 1590 in Rome. The wall maps were all designed to have nine large sheets and

53. Gastaldi, *La universale descrittione del mondo.* The five known editions are: 1561, Italian (Venice, Biblioteca Nazionale Marciana, D006D003); 1562, Italian (Venice, Biblioteca Nazionale Marciana, Miscell. 2280.006; Providence, R.I., John Carter Brown Library; and elsewhere); 1562, Latin (BNF, G.10623); 1565, Italian (BL, Maps 197.a.10); 1568, Latin (cited by Christian Sandler in "Die Anian-Strasse und Marco Polo," *Zeitschrift der Gesellschaft für Erdkunde zu Berlin* 29 [1894]: 401–8, esp. 404 n. 3, present location unknown; I thank Douglas W. Sims for this information).

54. Almagià, "Grande mappamondo perduto."

55. Almagià, "Grande mappamondo perduto," 262–65.

56. Woodward, *Maps and Prints of Paolo Forlani,* 9.

57. Woodward, *Maps and Prints of Paolo Forlani,* 48–49.

58. David Woodward, "Paolo Forlani: Compiler, Engraver, Printer, or Publisher?" *Imago Mundi* 44 (1992), 45–64, esp. 57.

59. Woodward, *Holzheimer Venetian Globe Gores.*

60. Gastaldi, *Universale descrittione.*

61. I owe this suggestion to Douglas W. Sims.

three half-sheets attached to the right side (making twelve in all). The map of Africa was based directly on Gastaldi's 1564 eight-sheet map, and the Americas bear a strong likeness to their representation on the BL world map. It is not unreasonable to suggest that Camocio's wall maps of the four continents were derived from a set made by Gastaldi in the 1560s.[62]

By the third quarter of the sixteenth century and throughout the seventeenth, sets of the four continent maps were becoming so popular as wall maps in private houses that they appear repeatedly in household inventories. For Venice, these have been documented most fully by Ambrosini.[63] The frequency of the references to these "descriptions of the world in four parts" might suggest that they were a symbolic furnishing accessory projecting the owner's interest in geography, reflecting his social and scholarly status. And although large paintings were usually the privilege of the well-to-do, the working classes were occasionally able to afford their less expensive equivalent: prints and maps. Andrea Bareta, a woolworker who died in 1587, owned a small collection of pictures, including the four continents—"Asia, Africha, et Europa, et Perú"—among the more expected sacred themes.[64]

Geographical prints in the inventories occurred mostly in the houses of the gentry, not only in Venetian townhouses, but also in the country houses of the terra firma. Lorenzo Tarabotto kept a set of four continental maps in black frames. The Tasca family exhibited a particular passion for maps in its villa at Gardigiano, having at least three sets spread throughout the house.[65]

Even in the last decade of the century, Gastaldi's name was still associated with this newly popular trend in consumption, twenty-five years after his death. It is unlikely that this reputation had been achieved without any examples of the original set ever having been made. An entry in the Plantijn archives lists ten sets of the Gastaldi "Partes quatuor" at 6 florins apiece.[66]

An allusion in a pamphlet sometimes bound with Paolo Giovio's *Istoria* (1572) and Carlo Passi's *La selva di varia Istoria* (1565) hints that Gastaldi was collaborating with someone on a "Geografia universale." The pamphlet was entitled *Tavola delle provincie, citta . . . con i lor nomi moderni et antichi raccolto in uno a beneficio di chi si diletta della Geografia et della Istoria* (Venice: Francesco Rocca, 1565). It contains a notice from its anonymous author to the reader in which he says he has taken not only from Giovio, but also from others, adding that he has the intention of making a "Geografia universale," conferring in this with "Mr. Giacomo Castaldo who has no equal in this."[67] The pamphlet was also printed separately with the title *Tavola nella quale si contengono i nomi antichi et moderni delle provincie, citta . . .* (Venice: Salicato, 1572).

CHARACTERISTICS OF THE VENETIAN MAP TRADE

Gastaldi died in October 1566[68] after providing a wealth of geographical source material for a critical mass of engravers and publishers who had shops on the Merzaria or neighboring streets in the late 1550s and 1560s. These included first Fabio Licinio, then Giovanni Francesco Camocio, Paolo Forlani, Niccolò Nelli, Domenico Zenoi, Michele Tramezzino, Ferdinando (or Ferando) Bertelli, and Bolognino Zaltieri. By the 1560s, map engraving and printing were far more intense in Venice than in Rome. There were probably five to six hundred copperplates for maps in active use in Venice, and perhaps half that number in Rome. The blockcutters Valvassore and Pagano had already been active for several decades, but the copperplate engraving trade had picked up significantly only in the 1550s. The print and map trade was marked by a close association with the *librari* or booksellers. Indeed, Van der Sman emphasizes that there was a symbiotic relationship between the two, and it is unwise to make a sharp distinction. He makes the point that the profit margins for prints were lower than for books, and that it made sense to combine the two activities. He also argues for the lower social status of more specialized printmakers, who rarely show up in the tax records, in contrast to wealthier businessmen such as Michele Tramezzino, whose income matched that of professionals working for the state.[69]

The peak in Venice for map publishing occurred around 1566, and the subjects of maps published that year alone show where the demand lay. Of the thirty-six dated plates issued that year, eight were of subjects associated with the Turkish wars, nineteen were of countries and regions, two were continental maps, and one was a world map.[70]

62. Woodward, "*Description of the Four Parts of the World.*"

63. Federica Ambrosini, "'Descrittioni del mondo' nelle case venete dei secoli XVI e XVII," *Archivio Veneto,* 5th ser., no. 117 (1981): 67–79, esp. 70.

64. Ambrosini, "Descrittioni," 69–70.

65. Ambrosini, "Descrittioni," 75.

66. Jean Denucé, *Oud-Nederlandsche kaartmakers in betrekking met Plantijn,* 2 vols. (Antwerp: De Nederlandsche Boekhandel, 1912–13; reprinted Amsterdam: Meridian, 1964), 2:275.

67. Emmanuele Antonio Cicogna, *Delle inscrizioni veneziane raccolte ed illustrate da Emmanuele Antonio Cigogna cittadino veneto,* 6 vols. (Venice: Giuseppe Orlandelli, 1824–53), 3:326b.

68. Venice, Archivio di Stato, Testamenti. Notaio Giovanni Figolini, Busta 440, numero 403, dated 2 October 1555, with a codicil indicating the day of his death as 19 October 1566.

69. Gert Jan van der Sman, "Print Publishing in Venice in the Second Half of the Sixteenth Century," *Print Quarterly* 17 (2000): 235–47, esp. 242–44. This article is a useful introduction to the booksellers and printmakers of the period but is less strong on the cartographic literature relevant to the topic.

70. These figures are taken from a count in Tooley's catalog "Maps in Italian Atlases," and it is probably a significant underestimate.

From 1565 onward, the wares of the Venetian map engravers were gathered in custom-made collections that clients could have bound to their taste (the options were usually limp vellum or full leather). Such composite atlases appeared before Lafreri's collections in Rome, so use of the blanket term "Lafreri atlas" to cover the Venetian products is misleading.[71] Although these composite atlases do not have title pages, colophons, marks of authorship, or other publishers' paraphernalia, the *librai* (booksellers and printsellers) most commonly associated with them on the basis of the maps included Ferdinando Bertelli, Giovanni Francesco Camocio, Paolo Forlani, Bolognino Zaltieri, and Domenico Zenoi; Bertelli's name occurs the most frequently as publisher. Plates might be borrowed, rented, held as collateral, or sold; prints could be wholesaled from one seller to another, and plates were rapidly (and sometimes temporarily) engraved with the name of the distributor. For example, the distributors Camocio and Bertelli are named as publishers on over half of Forlani's maps that name a publisher.[72]

The earliest atlas may be that preserved in Venice at the Biblioteca Nazionale Marciana, which has no map dated after 1565. The word "preserved" is used advisedly, considering that eight maps were stolen from it between 1954 and 1995.[73] The atlases in Florence, at the Biblioteca Marucelliana, in Rome, at the Biblioteca Casanatense, and in Chicago, at the Newberry Library, have no maps dated after 1567, and the Doria Atlas has no maps dated after 1570. The dating of these atlases is also aided by the identification of the watermarks of the marginal strips pasted to the edges of the maps to bring them up to a standard size for binding.[74]

From the stock of copperplates in the *bottega* the client chose a selection of maps to be assembled. Because little efficiency was gained by making multiple impressions from each plate, it was often the procedure to make one custom-made impression for the client; this can be reconstructed from the watermarks found on maps in several composite atlases. Often only a limited range of watermarks are found; in the case of one atlas at the Newberry Library, almost all the maps are printed on paper with the same pair of watermarks. In addition to printing maps to order in this fashion, merchants no doubt held other maps in stock, presumably bought from another publisher in Venice or Rome. In this case, the characteristic watermarks again provide the evidence.[75]

The choice of geographical subjects was broad. World maps, the four continents, large subcontinental regions (including countries), small subnational regions, town views, news maps of sea and land battles, and miscellaneous prints were all available. Atlases commonly included only one world map (sometimes two) and general maps of Europe, Asia, Africa, and sometimes the Americas.

Two specialized genres of atlas, the printed town book and the *isolario* also emanated from the Venetian map trade. The small printed collections of town and fortress views were the modest collector's equivalent of the larger composite atlases. First to appear in the Italian states was Paolo Forlani's *Il primo libro delle citta, et fortezze principali del mondo* (Venice, 1567). Some of the Forlani plates were adopted by Giulio Ballino for his *De' disegni delle piu illustri città, & fortezze del mondo* (Venice: B. Zalterij, 1568; reprinted 1569). Ballino's town book contains fifty views of towns or battles and a regional map of Transylvania with the locations of armies. Twenty of the views are of locations in the Italian states (fig. 31.11). Later versions were issued by the Bertelli family—first by Ferdinando, then by Donato, and then by Pietro and Francesco—in the form of a book of Italian cities.[76]

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71. George H. Beans suggested the term "IATO atlas," meaning Italian Assembled to Order, but this assumes only one scenario of how the atlases were produced. It is possible that some atlases were also printed to order. For an early use of the term, see George H. Beans, *Some Sixteenth Century Watermarks Found in Maps Prevalent in the "IATO" Atlases* (Jenkintown, Pa.: George H. Beans Library, 1938).

72. Woodward, "Forlani: Compiler, Engraver, Printer, or Publisher?" 58.

73. The atlas was first described by Rodolfo Gallo in *Carte geografiche cinquecentesche a stampa della Biblioteca Marciana e della Biblioteca del Museo Correr di Venezia* (Venice: Presso la Sede dell'Istituto Veneto, 1954). By 1978, four maps had already been removed, and by 1995 four more had disappeared: the Forlani-Bertelli, Cimerlino, and Floriano maps of the world and the Forlani map of North America. Atlases destroyed in the Second World War include that in the Biblioteca Bardi, Florence, now subsumed into the library of the Università degli Studi, Florence. Atlases owned by Gilhofer and Ransburg, Otto Lange, and the Lloyd Triestino have all been broken up.

74. The Quaritch Atlas is described in Bernard Quaritch, *The "Speculum Romanae Magnificentiae" of Antonio Lafreri: A Monument of the Renaissance Together with a Description of a Bertelli Collection of Maps* (London: Strangeway and Sons, [1925?]). The atlases in Venice, Biblioteca Nazionale Marciana, and Florence, Biblioteca Marucelliana, have not yet received full analysis, particularly the Marucelliana Atlas, which does not even have a published list of maps. For a detailed study of the Casanatense Atlas, see Albert Ganado, "Description of an Early Venetian Sixteenth Century Collection of Maps at the Casanatense Library in Rome," *Imago Mundi* 34 (1982): 26–47. On the Doria Atlas, see David Woodward, "Italian Composite Atlases," *Mapline* 18 (June 1980): 1–2.

75. David Woodward, "Italian Composite Atlases of the Sixteenth Century," in *Images of the World: The Atlas through History,* ed. John Amadeus Wolter and Ronald E. Grim, 51–70 (New York: McGraw-Hill, 1997). See appendix 31.2.

76. Juergen Schulz, "The Printed Plans and Panoramic Views of Venice (1486–1797)," *Saggi e Memorie di Storia dell'Arte* 7 (1970): 9–182; Ferdinando Bertelli, *Civitatum aliquot insigniorum et locor[um] magis munitor[um] exacta delineato* (Venice: Ferrando Bertelli, 1568), BL, Maps C.7.c.9; Donato Bertelli, *Le vere imagini et descritioni delle piu nobilli città del mondo* (Venice: Bertelli, 1572), dedicated to Ioann Iacobo Fuggero, in Wolfenbüttel, Herzog August Bibliothek, T 28 2° Helmst; and Pietro Bertelli, *Theatro delle città d'Italia . . .* , ed. Francesco Bertelli (Padua: F. Bertelli, 1629).

FIORENZA.

ARNO. F.

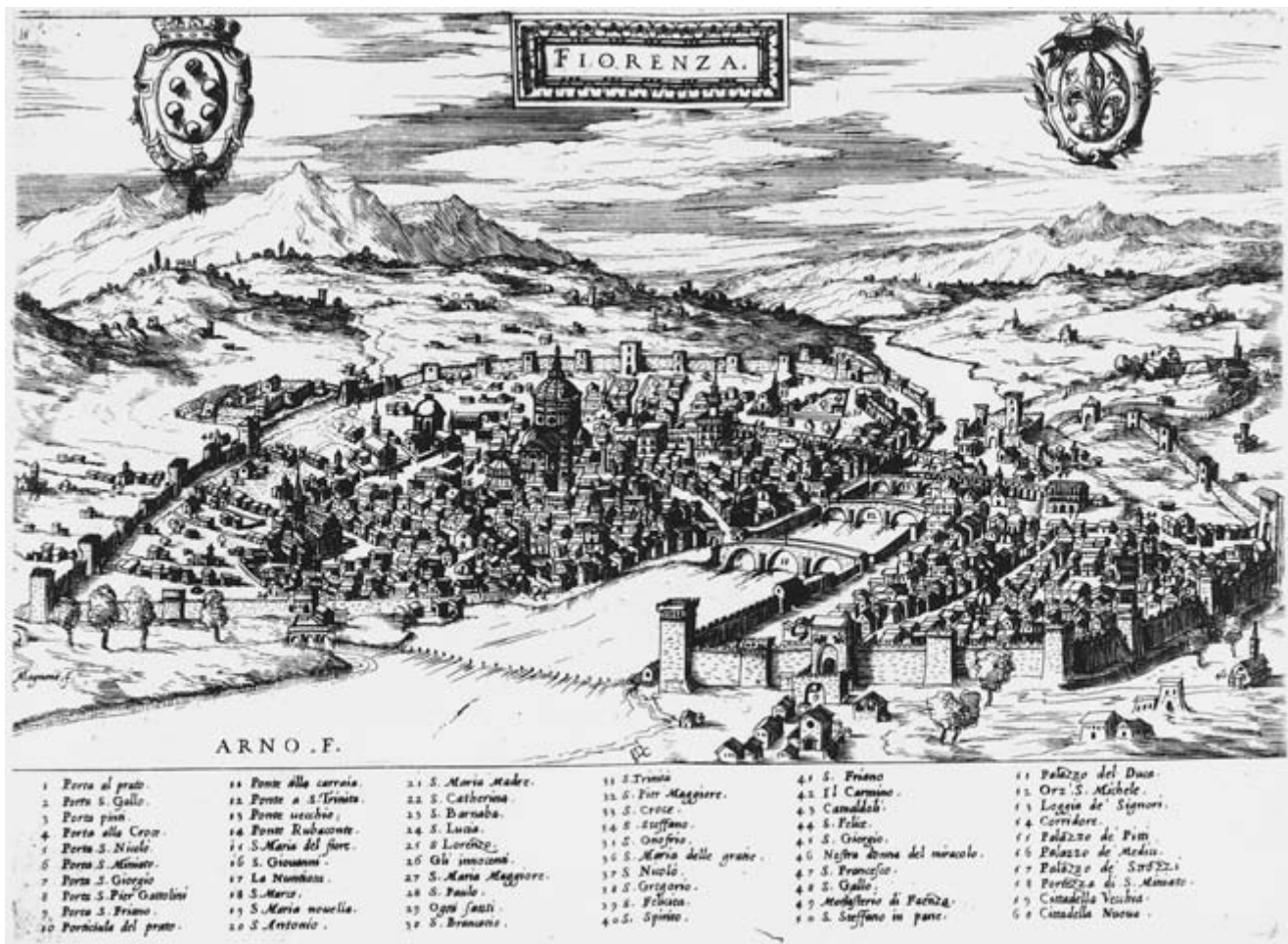|				
1 Porta al prato	11 Ponte alla carraia	21 S. Maria Madre	31 S. Trinita	41 S. Frieno	51 Palazzo del Duca
2 Porta S. Gallo	12 Ponte a S. Trinita	22 S. Catherina	32 S. Pier Maggiore	42 Il Carmine	52 Orz. S. Michele
3 Porta pinti	13 Ponte uechio	23 S. Barnaba	33 S. Croce	43 Camaldoli	53 Loggia de' Signori
4 Porta alla Croce	14 Ponte Rubaconte	24 S. Luca	34 S. Steffano	44 S. Felice	54 Corridore
5 Porta S. Nicolo	15 S. Maria del fiore	25 S. Lorenzo	35 S. Onofrio	45 S. Giorgio	55 Palazzo de Pitti
6 Porta S. Miniato	16 S. Giovanni	26 Gli innocenti	36 S. Maria delle grane	46 Nostra donna del miracolo	56 Palazzo de Medici
7 Porta S. Giorgio	17 La Nunziata	27 S. Maria Maggiore	37 S. Nicolo	47 S. Francesco	57 Palazzo de Strozzi
8 Porta S. Pier Gattolini	18 S. Marco	28 S. Paolo	38 S. Gregorio	48 S. Gallo	58 Fortezza di S. Miniato
9 Porta S. Frieno	19 S. Maria novella	29 Ogni santi	39 S. Felicita	49 Monasterio di Faenza	59 Cittadella Vechia
10 Porticiola del prato	20 S. Antonio	30 S. Brancatio	40 S. Spirito	50 S. Steffano in pane	60 Cittadella Nuova

FIG. 31.11. CITY VIEW OF FLORENCE FROM GIULIO BALLINO'S *DE' DISEGNI DELLE PIU ILLUSTRI CITTÀ, & FORTEZZE DEL MONDO,* 1569.

Size of the original: 28 × 42 cm. Photograph courtesy of the Newberry (Case fG 117.06).

The inspiration for this series of town books was Guillaume Guéroult's *Premier livre des figures et pourtraitz des villes plus illustres et renommées d'Europe* (Lyons: Balthazar Arnoullet, 1551), for which a royal privilege was granted on 5 December 1550. Guéroult was the author of the text, while Arnoullet supplied the illustrations. No extant copy of the 1551 edition is known, but one copy of a 1552 edition survives, as well as copies from 1553, 1557, and a version by Antoine Du Pinet dated 1564.[77]

The town books contained miniature versions of the standard views of cities seen from the traditional viewpoints, such as Rosselli's of Florence, with the city seen from the southwest, Barbari's of Venice, seen from the south, or Genoa, seen from the sea. Famous fortresses and sieges, associated either with the wars between the Italian states or with the Turkish battles in southeastern Europe or the Mediterranean (Szighet, Buda, Malta, and Lepanto), were also included.

Maps of islands were included in the later Bertelli versions of the town books ("with the addition of some principal islands"), but the genre of *isolarii* had a separate printed tradition in Venice dating from Benedetto Bordone's *Libro . . . de tutte l'isole del mondo* (1528) and the second printed edition of Bartolommeo dalli Sonetti's *isolario* (Venice, 1532).[78] Later in the sixteenth century, the best-known printed island books were *Isole famose, porti, fortezze, e terre maritimi* (attributed to Camocio) and Tommaso Porcacchi's *L'isole piv famose del mondo* (Venice, 1572). Associated engravers were Domenico Zenoi and Natale Bonifacio.[79] These works were the inspiration for André Thevet's "Grand insulaire," of which

77. Mireille Pastoureau, *Les atlas français XVIe–XVIIe siècles: Répertoire bibliographique et étude* (Paris: Bibliothèque Nationale, Département des Cartes et Plans, 1984), 225–27.

78. See chapter 8 in this volume.

79. Roberto Almagià, "Intorno all'opera cartografica di Natale Bonifacio," *Archivio Storico per la Dalmazia* 14 (1933): 480–93. The

all that remains are two manuscript volumes with eighty-four individual copperplate maps inserted at the corresponding chapter headings.[80]

The map trade, now independent of the noble patron, responded to market forces. The reader wanted *new* maps, and, from the wording in the titles of many maps ("copious," "exact," "latest," "modern," "new," "recent," and "true"),[81] probably thought he was getting them. The reader also wanted to understand the descriptive notes on the maps, and the common use of vernacular Italian met this demand (while limiting the utility of the maps in other countries, of course). Latin was still the most commonly read language of Europe among the scholarly classes, and while the use of Italian was the rule for the maps in the composite atlases, world maps and maps of islands were usually in Latin to capitalize on a wider market.

Because map engravers were often drawn from the ranks of print engravers, the aesthetics of the map trade, presumably in response to the consumer tastes of the day, received close attention. Maps required fine line definition to reflect the precision of a measured drawing that the copperplate engraving technique could effectively deliver. Abraham Bosse described one of the aesthetic qualities valued in the earliest impressions of copper-engraved prints as the stark contrast of distinct black lines against very white paper; the absence of color enhanced this aesthetic, which is why most Italian printed maps were rarely colored.[82]

Etching was a cruder medium that was not as common in Italian sixteenth-century map engraving. Its stylistic versatility could cater to the increasing demand for a wider range of tonal effects and artistic expression. Thus, etching was used for the decorative details of many maps, with the burin reserved for addition of the more exacting cartographic information. Forlani apparently used etching early in his career (in the early 1560s)—three of his early maps have rounded lines of consistent width and appear to be at least partly etched—but he quickly abandoned it.[83]

Maps also routinely required names, labels, titles, and text. The skills of calligraphy and map engraving were closely linked, and the compact, efficient, legible, semiformal hand adopted in the Vatican Chancery formed the basis for the engraved lettering on many maps.[84] It formed the basis for the first italic type, cut in 1500 for Aldus Manutius, and for the printed copy books of Lodovico degli Arrighi (ca. 1522) and Giovanniantonio Tagliente (1524). The style became popular throughout Europe in the sixteenth century. Another writing master, Giovambattista Palatino, was to become one of the most popular and accomplished Renaissance scribes and the author of an influential writing manual first published in 1540 (he also signed two maps in Bartolomeo Marliani's *Romae topographia,* 1544). Toward the end of the century, Giacomo Franco, map engraver and calligraphic master, signed several copper-engraved maps commonly included in the Italian composite atlases. In 1595, he published a manual on the chancery hand, followed by at least two other editions in 1596 and 1600.[85]

In August 1576, the plague erupted in Venice. More than forty-six thousand people died, a third of the population. Many Venetian copperplates that had made up the composite atlases probably found their way to Rome, particularly to Claudio Duchetti's shop. Duchetti was Lafreri's closest relative, and hence received the inheritance of plates by court order upon Lafreri's death in 1577. In order to enlarge his business, Duchetti had already bought other Venetian plates, and it would have made sense for him to acquire more after the Venetian plague. The plates stayed in the Duchetti family until 1593 and continued to be printed by Claudio's heirs.[86] By well before this time, however, the atlases of Ortelius, De Jode, and Mercator had established a monopoly in the printed map and atlas trade.

By dividing this discussion between the activities in Rome and those in Venice, I do not wish to imply that no commerce between map publishers in these cities took place. Although documentary evidence is scarce, the life histories of copperplates and the identification of successive batches of paper on which they were printed points to considerable movement of plates and maps between the centers. The case of Duchetti, who was in Venice between 1568 and 1570, has already been alluded to in other contexts. Another example is afforded by the publishing firm of Tramezzino.[87] Michele, it will be remembered, fled the

atlantino to which he refers (p. 483) is no longer conserved in the Biblioteca del Liceo di Santa Caterina (now Marco Foscarini), Venice.

80. Frank Lestringant, *Mapping the Renaissance World: The Geographical Imagination in the Age of Discovery,* trans. David Fausett (Berkeley: University of California Press, 1994), esp. 104–25 and 181.

81. In the original, *copiosa, exacta, exactissima, moderna, novo, novissima, recens, ultima, universalis, vera,* and *verissima.*

82. Abraham Bosse, *Traicté des manieres de graver en taille dovce svr l'airin: Par le moyen des eaux fortes, & des vernix durs & mols* (1645; reprinted Paris: Imprimerie Union, 1979).

83. Woodward, "Forlani: Compiler, Engraver, Printer, or Publisher?" 48.

84. David Woodward, "The Manuscript, Engraved, and Typographic Traditions of Map Lettering," in *Art and Cartography: Six Historical Essays,* ed. David Woodward (Chicago: University of Chicago Press, 1987), 174–212.

85. Carlo Pasero, "Giacomo Franco, editore, incisore e calcografo nei secoli XVI e XVII," *Bibliofilia* 37 (1935): 332–56.

86. Masetti Zannini, "Rivalità e lavoro," 547–66.

87. Antonino Bertolotti, *Artisti veneti in Roma nei secoli XV, XVI e XVII: Studî e ricerche negli archivi romani* (Bologna: Arnaldo Forni, 1884); P. S. Leicht, "L'Editore veneziano Michele Tramezino ed i suoi privilegi," in *Miscellanea di scritti di bibliografia ed erudizione in memoria di Luigi Ferrari* (Florence: Leo S. Olschki, 1952), 357–67; and Alberto Tinto, *Annali tipografici dei Tramezzino* (1966; reprinted Florence: Leo S. Olschki, 1968).

sack of Rome to Venice, while his brother Francesco returned to Rome. Between 1552 and 1563, Michele offered maps for sale both in his shop in the Via del Pellegrino and in the shop he possessed in Venice at the sign of the Sibyl. Tramezzino was the first to introduce the large maps of Cornelis Anthonisz. and Jacob van Deventer, publishing them in more manageable dimensions than those of the originals published in the Low Countries.[88]

The Map Trade in Northern Italy after 1576

The stagnation of the Venetian and Roman print trades at the end of the sixteenth century led to a severe shortage of engravers. This is well illustrated by the difficulties encountered by the compiler of the next generation of original geographical work, Giovanni Antonio Magini, in finding engravers for his magnum opus, the *Italia,* an atlas of sixty-one regional maps of the Italian states published in 1620.[89]

Magini was born in Padua in 1555 and followed a distinguished career as an astronomer and mathematician, holding the chair of astronomy at the University of Padua from 1588 to his death in 1617. He made his geographical name by editing a Latin edition of Ptolemy's *Geography* that appeared in 1596 after six years' work.[90] The originality of this edition is not striking; the *tabulae modernae* relied heavily on Mercator, Ortelius, and Gastaldi, and the text was based on Leandro Alberti's *Descrittione di tutta Italia,* with some additions by Magini on watercourses and boundaries. The twenty-seven Ptolemaic plates and thirty-seven *tabulae modernae* were engraved by Girolamo Porro, the meticulous Venetian engraver who was known to have engraved an image of Christ "composed of writing, so fine as to be only perused by a lens."[91] Porro engraved many other maps, including those for the *isolario* of Tommaso Porcacchi.

In 1595, in a dedication to Cardinal Sforza Pallavicino on a map of the territory of Bologna, Magini announced that he was planning a "compita descrittione," a collection of maps of Italy (fig. 31.12).[92] One state of this rare map bears the imprint of Francesco Valegio, a Venetian engraver and publisher who issued a town book in 1579 and whose imprint is found on many later states of Venetian maps commonly found in composite atlases.[93] Between 1595 and 1600, Magini managed to complete a good number of the maps of northern Italy, engraved by the skilled Flemish engraver Arnoldo di Arnoldi (Arnold Scherpensiel) and his brother Jacopo.

In 1600, Magini's problems with engravers began, the story of which Magini detailed in the preface to the *Tabulae primi mobilis* (Venice, 1604) to explain the delays in his atlas.[94] In that year, Matteo Florimi used a larger salary to lure Arnoldi away from Bologna to Siena to en-

grave a multisheet world map, the *Descrittione universale della terra.* Its dedication describes how it was started in Bologna and finished in Siena. On Arnoldi's death, Jacopo and his younger brother returned to Bologna, but Jacopo fell ill and decided to return to Flanders in 1603. Then, in the summer of that year, a replacement German engraver in Padua drowned while drunk the day after Magini had agreed to bring him to Bologna.

Magini's troubles continued. A Venetian engraver with a fine reputation ("Venetus"; he has not been identified) became insane after receiving the first map Magini had commissioned. Then, one "Amadeus Joannis" from Amsterdam was recruited in December 1603, but died the next year after completing the plate of the Principato Citra (the southern province of the kingdom of Naples) begun by Arnoldi.

For three years, from 1604 to 1606, Magini remained without engravers. In 1607, Benjamin Wright, a London engraver with considerable map experience (John Blagrave's world map, Lucas Jansz. Waghenaer's *Thresoor der zeevaert* and *Spieghel der zeevaerdt*) arrived in Bologna and engraved Magini's six-sheet wall map of Italy (1608), which carries Wright's signature. Magini's logistical difficulties were not over. Although he commissioned

88. See F. C. Wieder, *Nederlandsche historisch-geographische documenten in Spanje* (Leiden: E. J. Brill, 1915), esp. 111–58; Roberto Almagià, "La diffusion des produits cartographiques flamands en Italie au XVIe siècle," *Archives Internationales d'Histoire des Sciences* 7 (1954): 46–48; and Günter Schilder, "The Cartographical Relationships between Italy and the Low Countries in the Sixteenth Century," in *Imago et Mensura Mundi: Atti del IX Congresso Internazionale di Storia della Cartografia,* 3 vols., ed. Carla Clivio Marzoli (Rome: Istituto della Enciclopedia Italiana, 1985), 1:265–77. See also Schilder's ongoing *Monumenta cartographica Neerlandica* (Alphen aan den Rijn: Canaletto, 1986–) for references to Dutch influence on Italian maps and vice versa.

89. The standard source for Magini is Roberto Almagià, *L'"Italia" di Giovanni Antonio Magini e la cartografia dell'Italia nei secoli XVI e XVII* (Naples: F. Perrella, 1922). A summary is found in Roberto Almagià's introduction to *Italia: Bologna 1620,* by Giovanni Antonio Magini, ed. Fiorenza Maranelli (Amsterdam: Theatrum Orbis Terrarum: 1974), V–XXI.

90. *Geographiae universae* [Latin edition of Ptolemy's *Geography*] (Venice: Heirs of Simon Galignani, 1596; reprinted 1616). An unauthorized copy was engraved by Pietro Keschedt of Cologne and published in Arnhem in 1597, reprinted in 1617. An Italian translation by Leonardo Cernoti appeared in 1598, reprinted in 1621.

91. George Cumberland, *An Essay on the Utility of Collecting the Best Works of the Ancient Engravers of the Italian School: Accompanied by a Critical Catalogue* (London: Payne and Foss, 1827), 408.

92. Almagià, *L'"Italia,"* 14.

93. Thomas Ashby, "The Story of the Map of Italy," *Geographical Journal* 62 (1923): 212 n.* (review of Roberto Almagià's *L'"Italia" di Giovanni Antonio Magini e la cartografia dell'Italia nei secoli XVI e XVII*). Valegio issued the *Raccolta di li* [sic] *più illustri et famose città di tutto il mondo* (Venice, 1579), described in the Sotheby's auction catalog for 15 December 1975, and was associated with the engraver Stefano Scolari.
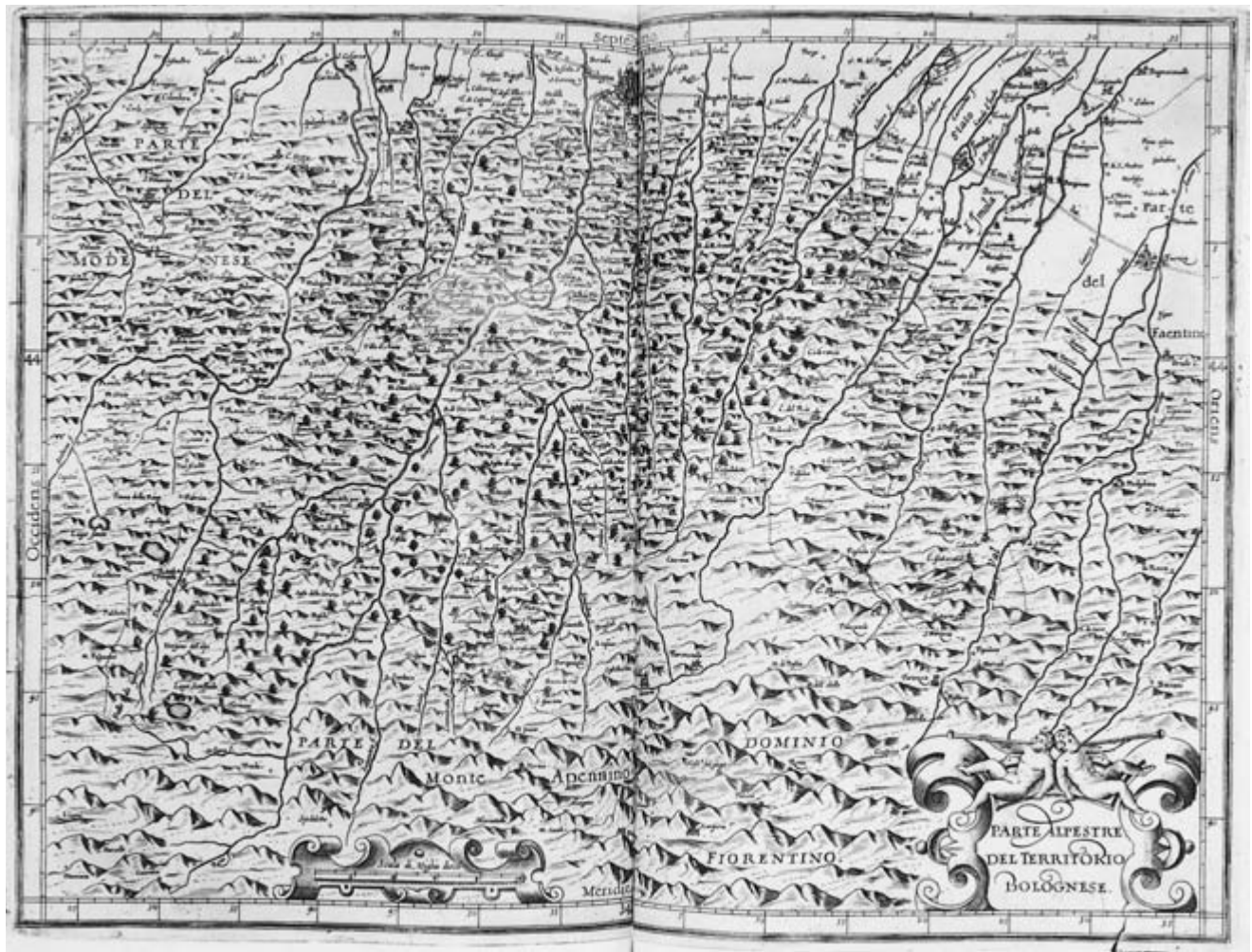
94. Almagià, *L'"Italia,"* 162.

FIG. 31.12. GIOVANNI ANTONIO MAGINI'S MAP OF THE TERRITORY OF BOLOGNA, 1595.

Size of the original: ca. 34.8 × 45.8 cm. Photograph courtesy of the BL (181.i.9).

Wright to engrave or retouch the remaining plates (fourteen in all) for *Italia,* Wright's character, as with several of his predecessors, was in question. He was a drunkard and gambler and pawned several of the plates that he had done. It was only in 1613 that the engraving of the atlas was finished with the plate of Piemonte and Monferrato, signed "Benjaminus Wright Londinensis Anglus."[95] Printing finally started in 1616 but was delayed by Magini's death the following February. His son, at the tender age of 18, arranged for the atlas to come out in 1620. He dedicated the whole work to Ferrante Gonzaga, duke of Mantua and Monferrato, a member of the family that had supported his father and provided many of the manuscript maps that ensured the originality of the atlas. No more than 20 percent of it was based on printed maps.[96]

The story of the engraving and printing of the *Italia* demonstrates the utter dependence of the Italian map and print publishers on foreign engravers at the beginning of the seventeenth century and the difficulty in finding and keeping them. The competition for Arnoldo di Arnoldi

was a case in point, and his activity in Siena in the employ of Matteo Florimi leads us to the most prominent center of map publishing other than Rome and Venice.

Florimi, whose name is not Siennese but whose birthplace is unknown, tells us in a preface to a book he published in 1602 that he had come to live in Siena many years before and had plied his trade, more recently "carrying there prints of various kinds of cosmography and various figurative drawings."[97] His activity as a book

95. Almagià, *L'"Italia,"* 11 and 19–21. See also Sidney Colvin, *Early Engraving & Engravers in England (1545–1695): A Critical and Historical Essay* (London: British Museum, 1905), 31–33.

96. The *Italia* exists in three editions—Bologna: Sebastiano Bonomi, 1620; Bologna: Clemente Ferroni, 1630–32; and Bologna: Niccolò Tebaldini, 1642. It contains twenty-four pages of textual description of Italy and sixty-one copperplate maps. The first edition is rare and distinguished by the crispness of the impression. See Almagià, *L'"Italia,"* 6–7.

97. The most reliable source of biographical information on Florimi is Aldo Lusini, "Matteo Florimi stampatore-calcografo del sec. XVI," *La Diana: Rassegna d'Arte e Vita Senese* 6 (1931): 75–89, esp. 75.

FIG. 31.13. MAP OF TERRA DEL FUEGO, FROM THE *AR-CANO DEL MARE* BY SIR ROBERT DUDLEY. Published in Florence in 1646–47 (compare fig. 31.14).
Size of the original: 27.7 × 24.7 cm. Photograph courtesy of the Newberry (Ayer *f 135 D8 1646, second book).
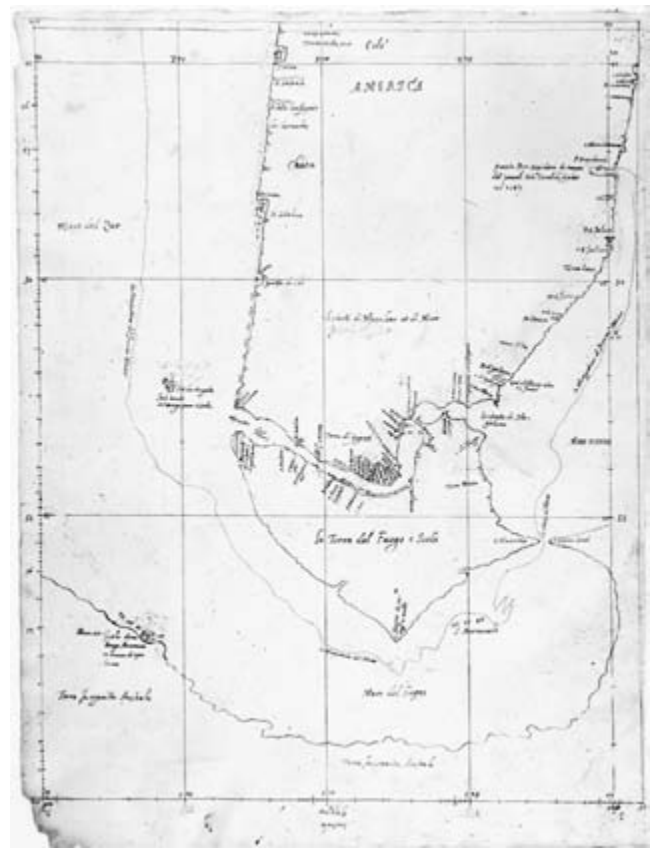

FIG. 31.14. MANUSCRIPT MAP OF TERRA DEL FUEGO. From the manuscript atlas used for volume 3 of the *Arcano del mare* (compare fig. 31.13).
Size of the original: ca. 44.8 × 34.5 cm. Photograph courtesy of the Bayerische Staatsbibliothek, Munich (MS. Icon 139, tome II, map 68J).

printer can be traced back to an imprint of 1589. As a print publisher, he is best known for his series of national allegories (France, Italy, Germany, and Spain) and his maps, many of which were the target of accusations of plagiarism, particularly the maps of the *Dominio Fiorentino,* and of the Holy Land (*Totius Terrae promissionis*), and of numerous versions of Italian and foreign cities. But the multisheet world map and maps of the four continents engraved by Arnoldi between 1600 and 1602 merit more study.[98]

The dependence on Flanders, the Netherlands, and France as sources of engravers for plates and maps for stock continued during the century, with a few significant exceptions. One was in the engraving for the *Arcano del mare,* a monumental compilation of nautical science and printed navigation charts published in Florence in 1646–47 and reprinted there in 1661 (fig. 31.13). The author was Sir Robert Dudley, the son of Robert Dudley, earl of Leicester, who, following the contestation of his noble birth in England, entered the service of Ferdinand I de' Medici, grand duke of Tuscany, in 1606 and remained in the grand ducal court to offer his knowledge of marine engineering until the end of his life. This knowledge had been inculcated by Thomas Chaloner at Christ Church College, Oxford, and given practical expression in the

voyage Dudley financed to the Orinoco and Trinidad under the pilot Abraham Kendal (1594–95). Dudley was instrumental in draining the marshes between Pisa and Livorno, rebuilding the fortifications of the port of Livorno, and encouraging English merchants to settle in the new free port.[99]

98. For a handlist of Florimi's maps, see H. A. M. van der Heijden, "Matteo Florimi (1613)—Landkarten- und Stadtplanverleger in Siena," in *Florilegium Cartographicum: Beiträge zur Kartographiegeschichte und Vedutenkunde des 16. bis 18. Jahrhunderts,* ed. Peter H. Köhl and Peter H. Meurer (Leipzig: Dietrich Pfachler, 1993), 117–30. See also L. Volpe, "Florimi, Matteo," in *Dizionario biografico degli Italiani* (Rome: Istituto della Enciclopedia Italiana, 1960–), 48:348–49, and Narcisa Fargnoli, "Un editore senese: Matteo Florimi," in *L'arte a Siena sotto i Medici, 1555–1609* (Rome: De Luca, 1980), 251–54.

99. The traditional standard source on the nautical activity in Livorno is Giuseppe Gino Guarnieri, *L'ultima impresa coloniale di Ferdinando dei Medici* (Livorno, 1910). The English biography is John Temple Leader, *Life of Sir Robert Dudley, Earl of Warwick and Duke of Northumberland* (Florence: G. Barbèra, 1895). The most recent general source is Cesare Ciano, *Roberto Dudley e la scienza del mare in Toscana* (Pisa: ETS Editrice, 1987).

FIG. 31.15. REDUCED VERSION OF DUDLEY'S PRINTED SEA CHART OF THE EAST COAST OF NORTH AMERICA. Size of the original: 22.5 × 19.5 cm. Photograph courtesy of Osher Map Library and Smith Center for Cartographic Education at the University of Southern Maine, Portland.

The *Arcano del mare* sprang from a school of nautical cartography Dudley founded in the Livorno arsenal. An atlas of manuscript maps is preserved in the Bayerische Staatsbibliothek, Munich, many of which were engraved for volume 3 of the *Arcano* (fig. 31.14).[100] The atlas, in which Dudley is titled duke of Northumberland and earl of Warwick, was dedicated to Ferdinand II de' Medici and appeared in two editions (1646–47 and 1661). Fifteen sea charts were apparently issued in a preliminary reduced form, but it is not known whether they were issued before or after the larger work, and they are now very rare (fig. 31.15).[101]

Considering the difficulty that Magini experienced in hiring engravers and his reliance on foreign labor, the appointment of an Italian print engraver, Antonio Francesco Lucini, the pupil of Stefano Della Bella and Jacques Callot, to undertake the maps was a notable exception. The incentives must have been considerable, for Lucini was an engraver of views (his view of Pisa has already been mentioned) and had little map experience.[102] Indeed, the motivation of Dudley's patron for such a lavish production can only have been the prestige that it might have brought him. It is doubtful that the commercial market could have supported such a venture alone.

CONCLUSIONS

The map engravers and publishers in Florence, Rome, and Venice played a leading role in Europe during the first two-thirds of the sixteenth century, but gave up this leadership to the Low Countries in the last third of the century and throughout the seventeenth. In their period of dominance, they formed many of the characteristics of the Renaissance map trade.

In the sixteenth century, the Italian map publishers transformed the map from the arcane tool of the navigator, scholar, or administrator into a common article of trade, the geographical print, that became part of everyday life. More attention has been paid to the process of compiling and using maps in official administration, exploration, and warfare than to their purchase and use at the popular level as informal consumer goods. Consequently, interest has focused on the geographic rather than the economic functions of maps.

The wares of the print shops of Venice and Rome might not have been avant-garde in disseminating new information about geographical discoveries. Rosselli's shop was no Casa de la Contratación. But it does not follow that inexpensive printed maps had no useful effect on the spread of geographical information or the formation of worldviews. As maps became everyday commodities disseminated by both shops (*botteghe*) and street sellers (*venditori ambulanti*), they played a subtle but important role in shaping ideas about strange places and events. The world maps magically captured the world as a single, universal, ordered image and caught the merchant's eye in

100. A selection of the manuscript maps in Munich are described in rough notes by Edward Everett Hale in *Early Maps of America: And a Note on Robert Dudley and the Arcano del Mare* (Worcester: American Antiquarian Society, 1874), and more recently in Ciano, *Roberto Dudley,* and in O. A. W. Dilke and Margaret S. Dilke, "Sir Robert Dudley's Contributions to Cartography," *Map Collector* 19 (1982): 10–14, esp. 12–13. A modern edition of the manuscript maps comparing them with those in the *Arcano del mare* is still a *desideratum*.

101. W. Graham Arader, III, *The Very Rare First Issues of the Sea Charts of Sir Robert Dudley,* catalog no. 50 (King of Prussia, Pa.: W. Graham Arader III, 1984). When they were offered for sale at Sotheby's on 27 and 28 June 1991, a short notice appeared in *Map Collector* 55 (1991): 44, drawing attention to the appending of "Il Cavaliere" to the engraver Lucini's name.

102. The title to volume 1 of the second edition of the *Arcano del mare* (1661) is followed by an undated dedication leaf to the Venetian Republic and signed by Lucini, with the verso blank. Here Lucini writes: "I, for twelve years sequestered from all the world in a little Tuscan village, have consumed no less than 5000 lbs (*libbra*) of copper in engravings to illustrate it." The quote appears in the fourth and last issue of the second edition, one that Lord Wardington dates to the early 1670s in "Sir Robert Dudley and the *Arcano del Mare*, 1646–8 and 1661," *Book Collector* 52 (2003): 199–211 and 317–55, esp. 350–51. The identity of the village has not been discovered, but Dudley lived in a villa near Fiesole. See Leader, *Life of Sir Robert Dudley,* 121–22, and "Lucini, Antonio Francesco," *Allgemeines Lexikon der Bildenen Künstler* 23 (1964): 438.

sponsoring new trading enterprises. As a source of topical and informal information, the siege and battle maps supplied the general public with information about current events with staggering immediacy, longevity, and durability. Over 140 separate representations of the siege of Malta appeared from 1565 for the next eighty years.

Maps were viewed not only as sources of geographical information but also as displayed symbols of social status. Maps of the world and the continents were designed to be sold to an expanding market of people eager to collect and display maps to enhance their reputation as cosmopolitan, patriotic, and informed citizens, as well as to evoke nostalgic feelings about glorious historical events and satisfy antiquarian curiosity about Rome's classical roots.

Clients were clearly interested in "modern" maps, even though geographical information might not always be consistent from map to map. The classical geography of Ptolemy and Strabo was replaced with a "modern" geography that incorporated the new discoveries. Although Ptolemy was invoked as an authority on the way atlases should be ordered, new authorities such as Giacomo Gastaldi earned reputations that persisted long after their deaths.

Map publishers also became economically less dependent on noble patronage as the variety and size of their stock increased and as the web of investment and cooperation with other printsellers became developed. The already well-formed canons of taste for the decorative and useful arts in the sixteenth century channeled wealth into luxury consumption and stimulated the trade and per capita income of skilled artisans, who were becoming consumers in their turn. Maps were part of a much larger print trade, subject to the same technical and marketing constraints as other prints. They were engraved by the same engravers, made in the same print shops, sold by the same street sellers, and were occasionally printed on either side of the same sheet of paper.

By the mid-1560s, the taste for collecting prints had become more regularized and democratized; a manual for arranging "universal theaters" or *Wunderkammer* had been published in 1565, and this contained a provision for the collecting of maps and prints. The range of graphic printed matter was staggering; engineering drawings or pattern books, herbal or anatomical manuals, emblem books, fortification and hydrological drawings, and maps and plans of all kinds were intended to provide useful technical information. They were not as numerous as traditional religious pictures in the sixteenth century, but they provided the natural sciences with the ability to compare and classify phenomena within the walls of the scholar's study.

The composite atlases that began to appear in the 1560s indicate that the printed map trade had matured and was driven by a market substantial enough to demand bound sets of maps and prints. Designed to preserve loose maps for the collector, the atlases have been the primary means by which the printed maps of Renaissance Italy have come down to us. In view of this, the widespread practice of disbanding and dispersing the maps in the modern antiquarian market is deplorable.

APPENDIX 31.1 A HISTORIOGRAPHICAL AND BIBLIOGRAPHICAL NOTE

Primary sources of information for the Renaissance Italian map trade are surprisingly scarce. Compared to the documents of many other trades, the contracts, inventories, wills, court cases, and guild records are in short supply for map engravers, printers, and publishers. As an extreme example, many more primary records survive of the activities of dormouse skinners in sixteenth-century Venice than of map engravers.[1] Even the most basic biographical records of a person as prominent among Venetian intelligentsia as Giacomo Gastaldi are still uncertain. Compared to the records for Ortelius or Mercator, archival documents for many of the mapmakers in the Italian Peninsula are rare indeed. The few bright spots, such as the inventory of Francesco Rosselli's shop, serve only to heighten our anticipation of how much more we could know if we had similar inventories for engravers and publishers such as Paolo Forlani at the height of Venetian activity.

The main circumstances for the survival of archival documents are related to tight control of the printing trades in both Venice and Rome. In Venice, licenses were issued by the Council of Ten, the senate, or some other specially appointed agency, and were intended to control the publication of material likely to offend religious, moral, or political sensitivities.[2] The need for permission reflects the general suspicion that surrounded publishing in Venice after the Council of Trent, as a consequence of which the Venetian authorities insisted, in 1566, that all printed items should be registered without charge by the *esecutori contro la bestemmia* (executors against blasphemy) in a special volume provided for that purpose.[3]

In contrast to the rigidly enforced license, the privilege, which was intended to provide publishers with a rudimentary form of copyright, was optional. In Venice, the applications and privileges are usually found in the files of the Senato Terra or the Riformatori dello Studio di Padova, in the State Archives. Not all publishers applied for one, not all privileges were recorded, and records of infringements have not come to light, so the items on file do not provide a complete picture.

The privileges do provide valuable information for identifying the date of a map, but the existence of applications for them do not necessarily indicate that a map appeared, for authors and printers routinely applied for privileges to cover the eventuality that someday such a work might be produced. Such was the misuse of the system that on 1 August 1517 the Venetian senate decreed that privileges would be granted only for new works, and that the right would be lost if nothing was published within a year.[4]

In Rome, the master of the Sacred Palace not only dispensed licenses, but also gave the owners of a plate the sole right to publish the registered print, usually for a period of ten years. In addition to the standard copyright privilege, a special privilege could be granted personally by the pope.

Household inventories provide a useful source of evidence about the market for printed maps. For fifteenth- and sixteenth-century Florence, the main archival sources are the estate book (*libro d'eredità*), intended to record the disposition of the deceased's goods, and the Office of Wards (Ufficio dei pupilli).[5] In Venice, Ambrosini and Palumbo-Fossati have studied a collection of registers of sixty-six lawyers recording inventories of the household goods of all social classes in all neighborhoods of the city compiled during the last half of the sixteenth century.[6]

Historians and paleographers such as Cardinal Franz (Francesco) Ehrle, S.J., for Rome and Horatio Brown for Venice laid the groundwork for archival sources, particularly for applications for licenses to print and for privileges protecting publishers. Ehrle was the prefect of the Vatican Library from 1895 to 1914. His series of monographs about the plans and views of Rome are far more than analytical studies of these maps: they are rich sources of archival evidence for their makers.[7] More recently, Masetti Zannini has covered some important new archival sources for Rome.[8] Brown's *Venetian Printing Press* is a remarkable work that, although allocating only twenty-four pages to the sixteenth century, manages to provide many of the archival references to map privileges.[9] Other bibliographical

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1. Richard MacKenney, *Tradesmen and Traders: The World of the Guilds in Venice and Europe, c. 1250–c. 1650* (London: Croom Helm, 1987), 18.

2. See Paul F. Grendler, *The Roman Inquisition and the Venetian Press, 1540–1605* (Princeton: Princeton University Press, 1977), 26, and Richard J. Agee, "The Privilege and Venetian Music Printing in the Sixteenth Century" (Ph.D diss., Princeton University, 1982). For other sources of information on the control of printing, see Leonardas Vytautas Gerulaitis, *Printing and Publishing in Fifteenth-Century Venice* (Chicago: American Library Association, 1976); Rinaldo Fulin, "Primi privilegi di stampa in Venezia," *Archivio Veneto* 1 (1871): 160–64; Maria Grazia Blasio, "Privilegi e licenze di stampa a Roma fra Quattro e Cinquecento," *Bibliofilia* 90 (1988): 147–59; and Carlo Castellani, *I privilegi di stampa e la proprietà letteraria in Venezia* (Venice: Fratelli Visentini, 1888).

3. Grendler, *Roman Inquisition,* 152.

4. David Landau and Peter W. Parshall, *The Renaissance Print, 1470–1550* (New Haven: Yale University Press, 1994), 301.

5. John Kent Lydecker, "The Domestic Setting of the Arts in Renaissance Florence" (Ph.D. diss., Johns Hopkins University, 1987).

6. Federica Ambrosini, "'Descrittioni del mondo' nelle case venete dei secoli XVI e XVII," *Archivio Veneto,* 5th ser., 117 (1981): 67–79, and Isabella Palumbo-Fossati, "L'interno della casa dell'artigiano e dell'artista nella Venezia del Cinquecento," *Studi Veneziani* 8 (1984): 109–53.

7. The first of Ehrle's works to appear was his *Roma prima di Sisto V: La pianta di Roma Du Pérac-Lafréry del 1577 riprodotta dall'esemplare esistente nel Museo Britannico. Contributo alla storia del commercio delle stampe a Roma nel secolo 16 e 17* (Rome: Danesi, 1908), a work that lays the basis for the early history of the map and print trade in Rome. Ehrle followed this work shortly with *Roma al tempo di Giulio III: La pianta di Roma di Leonardo Bufalini del 1551* (Rome: Danesi, 1911); *La grande veduta Maggi-Mascardi (1615) del Tempio e Palazzo Vaticano* (Rome: Danesi, 1914); and *Roma al tempo di Clemente VIII: La pianta di Roma di Antonio Tempesta del 1593 riprodotta da una copia vaticana del 1606* (Vatican City, 1932).

8. See Gian Ludovico Masetti Zannini, *Stampatori e librai a Roma nella seconda metà del Cinquecento: Documenti inediti* (Rome: Fratelli Palombi Editori, 1980), and idem, "Rivalità e lavoro di incisori nelle botteghe Lafréry-Duchet e de la Vacherie," in *Les fondations nationales dans la Rome pontificale* (Rome: École Française de Rome, 1981), 547–66.

9. Horatio Brown, *The Venetian Printing Press: An Historical Study Based upon Documents for the Most Part Hitherto Unpublished* (1891; reprinted Amsterdam: Gérard Th. van Heusden, 1969). A manuscript by Brown is also in Venice, at the Biblioteca Nazionale Marciana: "Privilegi veneziani per la stampa (1527–1597)," ca. 1890.

scholars who have touched on maps include Tinto, Fahy, and Misiti.[10]

Art historians and print historians have also made considerable contributions to the fund of archival knowledge of the map trade. Their interests stemmed from considering maps as a specialized form of geographical print. Karpinski has compiled a useful bibliography that includes material relevant to map engraving and printing.[11] In the nineteenth century, Antonino Bertolotti compiled a series of extremely useful books between 1879 and 1889 listing archival references to artists working in Rome who had come from elsewhere. The books cover the originating areas of Sicily; the Low Countries (with additions) and Urbino; Lombardy (with additions); Modena, Parma, and Lunigiana; Venice; Subalpine; Switzerland; Bologna, Ferrara, and other regions in the Papal States; France; Germany; and Sardinia, Sicily, Corsica, and Malta.[12] Hind's *Early Italian Engraving* is a basic source for the period of the fifteenth and early sixteenth century, compiled while he was head of the British Museum's Department of Prints and Drawings.[13] Other art historians who have contributed knowledge of the map trade include Hülsen, Gallo, Schulz, Borroni Salvadori, and Consagra.[14] Several general books on Italian printmaking that provide excellent starting points are those by Landau and Parshall and by Lincoln.[15]

The interests of geographers have generally focused on the geographical sources of maps made in the sixteenth century, particularly of the Italian regions, not on the reconstruction of the map trade, but their work contains much that is germane to the theme of this chapter. The highly prolific Italian geographer Roberto Almagià made several archival contributions in his many articles and two compendia of information and facsimiles, the *Monumenta Italiae cartographica* and the *Monumenta cartographica Vaticana,* compiled when he was under the protection of the Vatican during the Second World War as a result of his Jewish heritage.[16] Other Italian geographers made outstanding contributions to the history of Italian cartography, such as Baratta, Caraci, and Biasutti.[17]

There is still a need for systematic archival searches in Florence, Rome, and Venice. In Rome, the privileges recorded in the *Brevium Secretorum* (Archivio Segreto Vaticano) remain to be systematically searched. And although a good start was made in Venice by Brown and Almagià, the key to finding other documents—contracts, wills, inventories, and other legal documents—still lies in first identifying the lawyers associated with the engravers and publishers and then conducting a long, patient search, lasting months at a time, in the relevant files of the State Archives.

In the absence of archival material, historians of cartography, scholarly map collectors, and antiquarian map dealers and their staffs have compiled lists of maps and made studies of individual engravers. The standard list of sixteenth-century Italian printed maps is still that by Tooley.[18] The promise of an updated version to be published by Holland Press, including 50 percent more entries, never materialized, and the typescript has since

Library, 1993), 89–115; and Maria Cristina Misiti, "Antonio Salamanca: Qualche chiarimento biografico alla luce di un'indagine sulla presenza spagnola a Roma nel '500," in *La stampa in Italia nel Cinquecento,* 2 vols., ed. Marco Santoro (Rome: Bulzoni Editore, 1992), 1:545–63.

11. Caroline Karpinski, *Italian Printmaking, Fifteenth and Sixteenth Centuries: An Annotated Bibliography* (Boston: G. K. Hall, 1987).

12. For example, Antonino Bertolotti, *Artisti veneti in Roma nei secoli XV, XVI e XVII: Studi e ricerche negli archivi romani* (Bologna: Arnaldo Forni, 1884; reprinted 1965); idem, *Artisti subalpini in Roma nei secoli XV, XVI e XVII: Ricerche e studi negli archivi romani* (Mantua: Mondovi, 1884); and idem, *Artisti francesi in Roma nei secoli XV, XVI e XVII: Ricerche e studi negli archivi romani* (Mantua: G. Mondovi, 1886).

13. Arthur Mayger Hind, *Early Italian Engraving: A Critical Catalogue with Complete Reproduction of all the Prints Described,* 7 vols. (London: For M. Knoedler, 1938–48).

14. Christian Hülsen, *Saggio di bibliografia ragionata delle piante iconografiche e prospettiche di Roma dal 1551 al 1748* (1915; reprinted Rome: Bardi, 1969); idem, "Das 'Speculum Romanae Magnificentiae' des Antonio Lafreri," in *Collectanea variae doctrinae Leoni S. Olschki: Bibliopolae florentino, sexagenario* (Munich: Rosenthal, 1921), 121–70; Rodolfo Gallo, *Carte geografiche cinquecentesche a stampa della Biblioteca Marciana e della Biblioteca del Museo Correr di Venezia* (Venice: Presso la Sede dell'Istituto Veneto, 1954); Juergen Schulz, "The Printed Plans and Panoramic Views of Venice (1486–1797)," *Saggi e Memorie di Storia dell'Arte* 7 (1970): 9–182; Fabia Borroni Salvadori, *Carte, piante e stampe storiche delle raccolte lafreriane della Biblioteca Nationale di Firenze* (Rome: Istituto Poligrafico e Zecca dello Stato, 1980); Francesca Consagra, "The De Rossi Family Print Publishing Shop: A Study in the History of the Print Industry in Seventeenth-Century Rome" (Ph.D. diss., Johns Hopkins University, 1992); and idem, "De Rossi and Falda: A Successful Collaboration in the Print Industry of Seventeenth-Century Rome," in *The Craft of Art: Originality and Industry in the Italian Renaissance and Baroque Workshop,* ed. Andrew Ladis and Carolyn Wood (Athens: University of Georgia Press, 1995), 187–203.

15. Landau and Parshall, *Renaissance Print,* and Evelyn Lincoln, *The Invention of the Italian Renaissance Printmaker* (New Haven: Yale University Press, 2000).

16. Roberto Almagià, *Monumenta Italiae cartographica* (Florence: Istituto Geografico Militare, 1929); idem, *Monumenta cartographica Vaticana,* 4 vols. (Vatican City: Biblioteca Apostolica Vaticana, 1944–55); idem, *Scritti geografici (1905–1957)* (Rome: Edizioni Cremonese, 1961); Osvaldo Baldacci, "La storia della cartografia in Italia dopo Roberto Almagià," *Rivista Geografica Italiana* 93 (1985): 11–37; and George Kish, "Roberto Almagià: An Appreciation," in *Imago et Mensura Mundi: Atti del IX Congresso Internazionale di Storia della Cartografia,* 3 vols., ed. Carla Clivio Marzoli (Rome: Istituto della Enciclopedia Italiana, 1985), 1:xv–xvi.

17. Mario Baratta, "Ricerche intorna Giacomo Gastaldi," *Rivista Geografica Italiana* 21 (1914): 117–36 and 373–79; Giuseppe Caraci, "Avanzi di una preziosa raccolta di carte geografiche a stampa dei secoli XVI e XVII," *Bibliofilia* 29 (1927): 178–92; idem, "Note critiche sui mappamondi gastaldini," *Rivista Geografica Italiana* 43 (1936): 120–37 and 202–23; Renato Biasutti, "Il 'Disegno della geografia moderna' dell'Italia di Giacomo Gastaldi (1561)," *Memorie Geografiche* 2, no. 4 (1908): 5–66, and idem, "La carta dell'Africa di G. Gastaldi (1545–1564) e lo sviluppo della cartografia africana nei sec. XVI e XVII," *Bollettino della Reale Società Geografica Italiana* 9 (1920): 327–46 and 387–436.

18. R. V. Tooley, "Maps in Italian Atlases of the Sixteenth Century, Being a Comparative List of the Italian Maps Issued by Lafreri, Forlani, Duchetti, Bertelli and Others, Found in Atlases," *Imago Mundi* 3 (1939): 12–47.

10. Alberto Tinto, *Annali tipografici dei Tramezzino* (1966; reprinted Florence: Leo S. Olschki, 1968); Conor Fahy, "The Venetian Ptolemy of 1548," in *The Italian Book, 1465–1800: Studies Presented to Dennis E. Rhodes on His 70th Birthday,* ed. Denis V. Reidy (London: British

been mislaid or destroyed. Another very useful source of general bibliographical information is Ruge's comprehensive catalog of Renaissance cartographic material in German libraries.[19] Other catalogs focus on a single engraver or atlas. Examples include works by Bagrow, Beans, Ganado, and Woodward. The latter's list of the maps and prints of Paolo Forlani resulted in a paper analyzing the output of a single individual, and this model might be extended to other engravers and cartographers.[20] A list of Forlani's maps compiled by Baynton-Williams has also appeared on the Internet, and the flexibility of this form of publication has much to commend it.[21]

Useful collections of facsimiles of Italian Renaissance maps, in addition to Almagià's *Monumentae,* include Nordenskiöld's *Facsimile Atlas,* Caraci's *Tabulae geographicae, Cartografia Rara* of the Novacco collection, and Lago's *Imago mundi et Italiae* and *Imago Italiae.*[22] Many facsimile atlases of maps and views of individual cities have been published.[23]

19. Walther Ruge, "Aelteres kartographisches Material in deutschen Bibliotheken," *Nachrichten von der Königlichen Gesellschaft der Wissenschaften zu Göttingen, philologisch-historische Klasse,* 1904, 1–69; 1906, 1–39; 1911, 35–166; 1916, Beiheft, 1–128; reprinted in *Acta Cartographica* 17 (1973): 105–472.

20. Leo Bagrow, *Matheo Pagano: A Venetian Cartographer of the 16th Century, A Descriptive List of His Maps* (Jenkintown, Pa.: George H. Beans Library, 1940), and idem, *Giovanni Andreas di Vavassore: A Venetian Cartographer of the 16th Century. A Descriptive List of His Maps* (Jenkintown, Pa.: George H. Beans Library, 1939). See also George H. Beans, "Notes from the Tall Tree Library," in various issues of *Imago Mundi;* idem, *Fragments from a Venetian Collection of Maps, 1556–1567* (Philadelphia: George H. Beans Library, 1931); idem, *Maps ex Duke of Gotha Collection Acquired by the George H. Beans Library* (Jenkintown, Pa.: George H. Beans Library, 1935); Albert Ganado, "Description of an Early Venetian Sixteenth Century Collection of

Maps at the Casanatense Library in Rome," *Imago Mundi* 34 (1982): 26–47; and David Woodward, *The Maps and Prints of Paolo Forlani: A Descriptive Bibliography* (Chicago: Newberry Library, 1990). The articles deriving from that bibliography include David Woodward, "Paolo Forlani: Compiler, Engraver, Printer, or Publisher?" *Imago Mundi* 44 (1992): 45–64, and idem, "The Forlani Map of North America," *Imago Mundi* 46 (1994): 29–40.

21. [Ashley Baynton-Williams], "Forlani's Works: Parts I–IV," Map-Forum.com, vol. 1, no. 11 [2002], <http://www.mapforum.com/11/11issue.htm>.

22. A. E. Nordenskiöld, *Facsimile-Atlas to the Early History of Cartography with Reproductions of the Most Important Maps Printed in the XV and XVI Centuries,* trans. Johan Adolf Ekelöf and Clements R. Markham (1889; reprinted New York: Kraus, 1961); Giuseppe Caraci, *Tabulae geographicae vetustiores in Italia adservatae: Reproductions of Manuscript and Rare Printed Maps, Edited and Explained, as a Contribution to the History of Geographical Knowledge in the Period of the Great Discoveries,* 3 vols. (Florence: Otto Lange, 1926–32); Valeria Bella and Piero Bella, eds., *Cartografia rara: Antiche carte geografiche, topografiche e storiche dalla collezione Franco Novacco* (Pero, Milan: Edizioni Cromorama, 1986); Luciano Lago, ed., *Imago mundi et Italiae: La versione del mondo e la scoperta dell'Italia nella cartografia antica (secoli X–XVI),* 2 vols. (Trieste: Edizioni La Mongolfiera, 1992–94); and idem, *Imago Italiae: La fabrica dell'Italia nella storia della cartografia tra Medioevo ed età moderna. Realtà, immagine ed immaginazione,* ed. Luciano Lago (Trieste, 2003); published simultaneously in English with identical pagination under the title *Imago Italiae: The Making of Italy in the History of Cartography from the Middle Ages to the Modern Era. Reality, Image and Imagination,* trans. Christopher Taylor and Christopher Garwood.

23. A selection of particularly useful ones includes Amato Pietro Frutaz, *Le piante di Roma,* 3 vols. (Rome: Istituto di Studi Romani, 1962); Albert Ganado and Maurice Agius-Vadalà, *A Study in Depth of 143 Maps Representing the Great Siege of Malta of 1565,* 2 vols. (San Gwann, Malta: Publishers Enterprises Group, 1994–95); Giocondo Cassini, *Piante e vedute prospettiche di Venezia (1479–1855)* (Venice: La Stamperia di Venezia Editrice, 1982); and Schulz, "Views of Venice."

APPENDIX 31.2 LOCATIONS WITH ITALIAN COMPOSITE ATLASES AND SIGNIFICANT COLLECTIONS OF ITALIAN SIXTEENTH-CENTURY PRINTED MAPS PROBABLY DERIVING FROM COMPOSITE ATLASES

The following list is preliminary and by no means complete. Unless otherwise stated, citations are believed to refer to bound atlases. Where known, information has been included as to whether the collection has been disbound (i.e., consists of loose sheets) or has been dispersed, usually by sale. The total number of maps given is not consistently stated, because some sources may have included prints of town plans, views, and battle scenes as well as maps. Call numbers are given when known, but the best source of information is likely to be the librarian at each institution. The list is organized alphabetically by country and city. Descriptions of atlases in auction catalogs are included where known. Atlases in private collections are included only when the permission of the collector was granted. The assistance of Albert Ganado, Francis Herbert, Robert W. Karrow, Peter H. Meurer, Kenneth Nebenzahl, Günter Schilder, Rodney W. Shirley, and Douglas W. Sims is much appreciated.

AUSTRIA

Krems an der Donau. Göttweig Monastery Library. About 100 maps. Franz Wawrik, "Kartensammler und -sammlungen in Österreich," in *Karten hüten und bewahren: Festgabe für Lothar Zögner* (Gotha: Justus Perthes, 1995), 205–20, esp. 207.

Salzburg. Universitätsbibliothek. Many catalog entries to sixteenth-century Italian maps with the annotation "Wolf Dietrich Klebeband sign. 15846-III." Some sheets were transferred to the Graphische Sammlung.

Vienna. Österreichische Nationalbibliothek. Von Stosch Atlas. 133 maps, disbound since 1841–43. Rodney W. Shirley, "Three Sixteenth-Century Italian Atlases from the former Austro-Hungarian Empire," *IMCoS Journal* 72 (1998): 39–43, and idem, "Updated News about Sixteenth-Century Italian Atlases," *IMCoS Journal* 80 (2000): 11–14.

BELGIUM

Sint-Niklaas. Koninklijke Oudheidkundige Kring van het Land van Waas. 92 maps. In 1994, the atlas was disbound and the maps were separately mounted; their status now is unknown. Rodney W. Shirley, "Early Italian Atlas Maps in the Mercator Museum, Sint-Niklaas, Belgium," *IMCoS Journal* 60 (1995): 15–17.

CZECH REPUBLIC

Brno. Karel Kuchař, "Zalteriho kopie klaudyánovy mapy" (Zaltieri's copy of Claudianus's Bohemia), *Kartografický Přehled* 11 (1957): 112–20.

DENMARK

Copenhagen. Kongelige Bibliotek. 77 maps.

FINLAND

Helsinki. Yliopiston Kirjasto. Copy 1. 79 maps.
Helsinki. Yliopiston Kirjasto. Copy 2. 41 maps.

FRANCE

Grenoble. Bibliothèque Municipale. 9 vols. Rodney W. Shirley, "Something Old, Something New From Grenoble: A Collection of 16th Century Italian Maps," *IMCoS Journal* 50 (1992): 37–38 and 40.

Lyons. Bibliothèque Municipale. Rés. 24.014. Rodney W. Shirley, "Something Old, Something New From Lyon: A Further Collection of 16th Century Italian Maps," *IMCoS Journal* 55 (1993): 27–31.

Nancy. Bibliothèque Médiathèque. 2 atlases: (1) Rés. 2, 101 maps and 42 prints and views; (2) Rés. 2, 35 maps and 10 prints. Shirley, "Something Old, Something New from Paris and Nancy," 32–36.

Paris. Arcoles. Paris, 12 October 1992. 101 maps offered as individual items. Albert Ganado, "Description of a Splendid Collection of 950 Maps and Views of the Sixteenth and Seventeenth Centuries at the Malta National Library," *Proceedings of History Week* (1992; reprinted Malta: Malta Historical Society 1994), 137–228, esp. 148.

Paris. Bibliothèque de l'Arsenal. Gr. Fol. 146.

Paris. BNF. Département des cartes. Many separate maps that were probably parts of composite atlases. For example, the catalog lists eight impressions of Paolo Forlani's map of North America (1565–66). See the unpublished, undated manuscript by Marcel Destombes, "Les cartes de Lafreri et assimilées (1532–1586) Inventaires des collections de la Bibliothèque Nationale."

Paris. BNF. Département des estampes. Marcel Destombes, *Les cartes de Lafreri et assimilées 1532–1586 du Département des estampes de la Bibliothèque nationale* (Paris: Comité National de la Gravure Française, 1970).

Paris. Drouet Richelieu, 12–13 October 1992. Nos. 19–117. "Unusual Items That Have Come Up for Sale," *Imago Mundi* 45 (1993): 144–48, esp. 147.

Paris. Étude Tajan. November 1998. See Germany, Bedburg-Hau.

Paris. Private collections. One atlas (ex Harley Drayton), 86 maps in one collection; two further atlases (70 maps and 80 maps, respectively) in other collections, unconfirmed.

Paris. Université de la Sorbonne. Rra 72. 56 maps. Rodney W. Shirley, "Something Old, Something New from Paris and Nancy: Yet More Early and Rare Italiana, Including 14 Maps by Pagano or Vavassore," *IMCoS Journal* 67 (1996): 32–36. Includes rare multisheet and single-sheet maps by Pagano and Valvassore.

GERMANY

Bedburg-Hau. Antiquariat Gebr. Haas OHG. 191 maps and cartographic prints. Bought jointly by Paul Haas and Stephan Haas (Germany) and Didier Le Bail and Friedrich Weissert (Paris). See Peter H. Meurer, *The Strabo Illustratus Atlas: A Unique Sixteenth Century Composite Atlas from the House of Bertelli in Venice*, ed. Paul Haas et al. (Bedburg-Hau: Haas, 2004).

Dillingen. Studienbibliothek. X, 122. 106 maps. Walther Ruge, "Aelteres kartographisches Material in deutschen Bibliotheken," *Nachrichten von der Königlichen Gesellschaft der Wissenschaften zu Göttingen, philologisch-historische Klasse,* 1904, 1–69; 1906, 1–39; 1911, 35–166, esp. 132–52; 1916, Beiheft, 1–128; reprinted in *Acta Cartographica* 17 (1973): 105–472, esp. 310–30.

Dillingen. Studienbibliothek. X, 123. 131 maps. Ruge, "Aelteres kartographisches Material in deutschen Bibliotheken."

Metten. Bibliothek des Benedictinerstiftes. Geogr. VI 107. 47 maps.

Munich. Karl & Faber Antiquariat catalog, 20 September 1932, item 37. 173 maps (1540–1630). Present location unknown.

Rostock. Universitätsbibliothek. Q. k. 3. 82 maps.

Stuttgart. Württembergische Landesbibliothek. Karten- und Plan-Kabinet. 97 maps.

Wolfegg. Schloss Wolfegg. Kupferstichkabinet Geogr. 169. 102 maps.

Wolfegg. Schloss Wolfegg. Another example, remnant with 15 maps only.

Wolfenbüttel. Herzog August Bibliothek. 2. 3 Geogr 20. 74 maps.

HUNGARY

Budapest. Országos Széchényi Könyvtár (National Library). TA 276. 87 maps. Shirley, "Three Sixteenth Century Italian Atlases," 39–43.

ITALY

Bergamo. Biblioteca Civica A. Mai. 50 maps.

Bologna. Biblioteca Comunale. 50 maps.

Bologna. Prof. C. Errera. Roberto Almagià, in "Sulle più antiche raccolte di carte geografiche stampate non Tolomaiche," in *Atti del X Congresso Internazionale di Geografia* (Rome: Reale Società Geografica, 1915), 1339–41, cited two examples there in 1915, but their whereabouts are no longer known.

Cagliari. Biblioteca Universitaria di Cagliari. Carte geografiche 245/1–65. 65 maps.

Fano. Biblioteca Comunale Federiciana.

Florence. Biblioteca Bardi. This library was subsumed by the library of the Università degli Studi di Firenze, but a search in 1977–78 revealed no atlas.

APPENDIX 31.2 (*continued*)

Florence. Biblioteca Marucelliana. 80 maps plus 53 plans, views, and battle scenes. Rodney W. Shirley, "A Lafreri Atlas in the Biblioteca Marucelliana, Florence," *IMCoS Journal* 100 (2005): 29–31.

Florence. Biblioteca Nazionale Centrale. 12.–.44, v. 1 and 2. [Rome]. 251 maps.

Florence. Biblioteca Nazionale Centrale. 12.–.44, v. 3. [Rome]. 105 maps.

Florence. Biblioteca Nazionale Centrale. 12.–.44, v. 4. [Venice?]. 135 maps.

Florence. Collection of at least 375 maps. Volume 1 was broken up by the Florentine dealer Mascelli. The residue of about 20 was acquired by W. Ashburner. See Giuseppe Caraci, "Avanzi di una preziosa raccolta di carte geografiche a stampa dei secoli XVI e XVII," *Bibliofilia* 29 (1927): 178–92.

Florence. Olinto Marinelli. No trace found.

Florence. Otto Lange. 126 maps. Since dispersed.

Milan. Raccolta Bertarelli. VOL CC 105. 118.

Milan. Raccolta Bertarelli. VOL EE 46 1–240.

Modena. Biblioteca Estense. 38. N. 7. 65 maps.

Padua. No sixteenth-century Italian composite atlases found (Tooley had included).

Palermo. Biblioteca Comunale. No trace found. A late sixteenth-century atlas of 84 maps probably assembled by Giovanni Orlandi was at one time in a private collection in Sicily and was broken up and sold in the 1980s. Ganado, "950 Maps and Views," 150.

Rome. Biblioteca Alessandrina. Rari 272.

Rome. Biblioteca Angelica. Remnant with 18 maps only.

Rome. Biblioteca Casanatense. Rari 1131. 94 maps.

Rome. Biblioteca Corsiniana. 29.K.1.

Rome. Biblioteca Nazionale Vittorio Emanuele II. Copy 1. 711.6.G.1.

Rome. Biblioteca Nazionale Vittorio Emanuele II. Copy 2. 711.6.G.2.

Rome. Biblioteca Nazionale Vittorio Emanuele II. Copy 3. 711.6.G.3.

Rome. Calcografia Nazionale.

Rome. Christie's sale, 17 June 2004; about 60 items from an Italian composite atlas, disbound before sale.

Rome. Gabinetto delle Stampe, Palazzo Corsini. 26-M-27. [Thirty miscellaneous city views published by Giovanni Orlandi, 1606.]

Rome. Gabinetto delle Stampe, Palazzo Corsini. 44-H-19.

Rome. Gabinetto delle Stampe, Palazzo Corsini. 44-H-35.

Treviso. Biblioteca Comunale. 73 maps.

Turin. Archivio di Stato. J.B.I.3, vol. 1.

Venice. Biblioteca Nazionale Marciana. 138. c. 4.

Venice. Biblioteca del Liceo di Santa Caterina (now Marco Foscarini). 32 maps. Actually a Camocio-type *isolario*. Now missing.

LITHUANIA

Vilnius. Universiteto Biblioteka. Ex Joachim Lelewel. 75 maps and 35 plans and other prints. Rodney W. Shirley, "Old Atlases in the Library of Vilnius University—A Postscript," *IMCoS Journal* 68 (1997): 51–52.

MALTA

Valletta. National Library of Malta. 128 maps. Volume VI of a six-volume folio atlas. Four maps of Malta were stolen from the volume in the 1970s. Ganado, "950 Maps and Views," 197–209.

Valletta. National Library of Malta. K.17.26. 91 maps. Ganado, "950 Maps and Views," 209–17.

NETHERLANDS

Leiden. Universiteitsbibliotheek. Two sets: (1) 98 maps from the Isaac Vossius Library, atlas disbound in the last quarter of the nineteenth century and sheets mounted on cardboard; (2) 88 maps, probably from a larger collection or atlas once part of the Bodel Nijenhuis collection. Dirk de Vries, "Atlases and Maps from the Library of Isaac Vossius (1618–1689)," *International Yearbook of Cartography* 21 (1981): 177–93, esp. 184 n. 25. In a manuscript

catalog of Vossius's library under Mathematici, fol. no. 9, is "a collection of various old maps, engraved by Paolo Forlani from Verona, printed in Venice about 1560" (p. 180).

Rotterdam. Maritiem Museum. Engelbrecht Collection. About 75 unbound maps. See E. Bos-Rietdijk, *Italiaanse kaartenmakers: De Italiaanse kaarten uit de Collectie W. A. Engelbrecht in het Maritiem Museum 'Prins Hendrik' in Rotterdam* (Alphen aan den Rijn: Canaletto, 1996). It is unclear how many atlases contained this set of separate Italian maps.

POLAND

Cracow. Czartoryski Library. Krak.-Czart. Atl.307.V. 106 maps. Shirley, "Three Sixteenth Century Italian Atlases," 39–43, and Marjan Łodyński, *Centralny katalog zbiorów kartograficznych w Polsce,* 5 vols. (Warsaw, 1961–), 2:6.

Wrocław. Stadtbibliothek. P b 42. 27 maps. The Stadtbibliothek Breslau was destroyed in World War II.

RUSSIA

St. Petersburg. Institute of Mining. Unconfirmed. If this refers to the atlas mentioned in *Map Collector* 53 (1990): 49a, "a composite sixteenth-seventeenth century atlas in the Central Library of the Leningrad Institute of Mining," it is definitely not an Italian composite atlas. The maps in that atlas are all Dutch, without exception, and all dated from 1597–1680. For a description, see V. G. Bauman, "Sbornik kart XVI–XVII vekov v blarnoy Biblioteke Leningradskogo Gornogo Instituta (iz sobraniya V. N. Tatishcheva?)," *Izvestiia Vsesoiuznogo Geograficheskogo Obshchestva* 122 (1990): 262–66.

SPAIN

Escorial. Biblioteca.
Madrid. Biblioteca Nacional. 79 maps.
Madrid. Formerly Biblioteca Particular de S. M. el Rey. 160 maps.

SWITZERLAND

Basel. Öffentliche Bibliothek der Universität. 122 maps.

UNITED KINGDOM

Birmingham. Birmingham Public Library. 98 maps. Ex Francis Edwards (Milton Abbey copy).

Hatfield. Hatfield House. 100 maps. Rodney W. Shirley, "A Rare Italian Atlas at Hatfield House," *Map Collector* 60 (1992): 14–21. Contemporary color.

London. Bernard Quaritch. Youssouf Kamal Atlas. 50 maps. Present location unknown.

London. BL. K. Top. 4. 143 maps assembled from loose sheets in the nineteenth century, but only 6 are Italian (all world maps).

London. BL. Maps C.7.c.9. Ferdinando Bertelli Atlas with title page *Civitatum aliquot insigniorum . . . ,* dated 1568 and consisting of 87 items, of which 40 are maps and 47 are prints, views, or plans, mostly by Ferdinando Bertelli, Paolo Forlani, and Giovanni Francesco Camocio.

London. BL. Maps C.7.e.1. 150 maps out of 157 maps; 7 maps have been removed by the BL and are held separately.

London. BL. Maps C.7.e.2. 73 maps.

London. BL. Maps C.7.e.3. 114 maps in two volumes, but only a few are Italian and most are Dutch.

London. BL. Maps C.7.e.4. 77 maps. Include views, plans, and battle scenes as well.

London. Christie's. Giannalisa Feltrinelli Library. 20 May 1998. Present location unknown.

London. National Maritime Museum. c3995. 107 maps. From Sotheby's, 11 December 1935, lot 593, the property of Philip D. Turner.

London. National Maritime Museum. c5309. 67 maps.

London. Royal Geographical Society, Map Room, 264.G.1 (Wyld). 88 prints (mostly maps, the remainder plans/views, battles/sieges, and 6 letterpress leaves of indexes/gazatteers). From 1535 to at least 1570.

London. Royal Geographical Society, Map Room, 264.G.2 (Peckover). 101 prints (mostly maps; no letterpress items). From either [1542] or 1545 to the mid-1570s.

London. Shapero Gallery. 10 October 2005. 104 maps. "Doria Atlas." (Formerly owned by Lord Wardington; sold by Sotheby's.)

London. Sotheby's. 10 December 1998. Lot numbers 145–218. Sale of 74 loose sheets from a one-time Italian composite atlas.

London. Sotheby's. 14 December 2000. 129 unbound maps originally part of a broken atlas (not the same as those in 10 December 1998 sale). Property of a "Lady." Lots 221–349.

UNITED STATES

Austin. University of Texas. Humanities Research Center. Approximately 30 maps plus globes and gores, some of which are not sixteenth-century Italian, acquired from H. P. Kraus in 1970.

Austin. University of Texas. Humanities Research Center. -F- 912 B461A 1553. 81 maps.

Chicago. Kenneth Nebenzahl, Inc. 72 maps. Provenance: Henry Stevens–George H. Beans–Kenneth Nebenzahl–Roy Boswell–Kenneth Nebenzahl, Inc.

Chicago. Newberry. Ayer *ƒ135 L2 1575 AI. 41 maps.

Chicago. Newberry. Franco Novacco Collection. 73 sheets. Originally comprised of 115 sheets in the Ayer Collection, the atlas was disbound sometime between 1967 and 1970. The remaining 42 sheets, all duplicated elsewhere in the Newberry's collections, were sold to Kenneth Nebenzahl.

New Haven. Yale University. Beineke Library. Rare Book Room EE23 5696 (Audubon case). 125 maps. Winfield Shiras, "The Yale 'Lafréry Atlas,'" *Yale University Library Gazette* 9 (1935): 55–60.

New York. H. P. Kraus. Lloyd Triestino atlas originally with 137 maps acquired by H. P. Kraus in the 1960s ex George H. Beans; maps subsequently dispersed, some to the University of Texas. Kraus offered the Triestino Atlas as a whole in his catalogue 124 from 1969. Three years later, he offered 133 Lafreri-style maps in catalogue 132.

New York. New York Public Library. Lenox Library *KB+++1572. 109 maps and manuscript list.

Washington, D.C. Library of Congress. 102 maps.

VATICAN CITY

Biblioteca Apostolica Vaticana. Many separate maps that were probably parts of composites atlases. Roberto Almagià, *Monumenta cartographica Vaticana,* 4 vols. (Vatican City: Biblioteca Apostolica Vaticana, 1944–55), 2:1–131.