Libraries: Architecture and the Ordering of Knowledge


All the texts describing ancient libraries had been rediscovered by the mid-Quattrocento. Humanists knew Greek and Roman libraries from the accounts in Strabo, Varro, Seneca, and especially Suetonius, himself a former prefect of the imperial libraries. From Pliny everyone knew that Asinius Pollio founded the first public library in Rome, fulfilling the unrealized wish of Juliuys Caesar (“Ingenia hominum rem publicam fecit,” ”He made men's talents public property”). From Suetonius it was known that Augustus founded two libraries, one in the Porticus Octaviae, and another, for Greek and Latin books, in the temple of Apollo on the Palatine, where the sculptural decoration included not only a colossal statue of Apollo but also portraits of celebrated writers. The texts spoke frequently of author portraits, and also of the wealth and splendor of ancient libraries. The presses for the papyrus rolls were made of ebony and cedar; the architectural order and the revetments of the rooms were of marble; the sculpture was of gilt bronze. Boethius added that libraries were adorned with ivory and glass, while Isidore mentioned gilt ceilings and restful green cipollino floors. Senecan disapproval of ostentatious libraries, of "studiosa luxuria," of piling up more books than one could ever read, gave way to admiration for magnificent libraries.

Yet it was not until the modern excavations of the Biblioteca Ulpia in the Forum of Trajan in Rome or the Library of Celsus at Ephesus that an actual library building from antiquity came to light. The early Renaissance library revived the ideal of the great public libraries of antiquity, but did so by borrowing the forms of medieval mendicant architecture.

Biblioteca San Marco
The library established by Cosimo de' Medici in the convent of the Dominicani osservanti of San Marco in Florence cherishes its reputation as the first public library of the Renaissance. Earlier attempts at turning the private collections of scholars into public libraries had not met with success. Petrarach's books, refused by Venice, went to Pavia, from which they were plundered by François I and shipped to Paris. Boccaccio's books were consigned in 1387 to the Augustinian convent of Santo Spirito in Florence but remained shut up in cases. One needed not only a worthy collection but a great maecenas to reverse this depressing trend.

Such a patron appeared in the person of Cosimo de' Medici, the future Pater Patriae, who at age 28 already owned 63 books. After a lifetime of collecting he turned many of his books over to the Dominicans of San Marco to join the 400 books bequeathed by the Florentine bibliophile,
Niccolo Niccoli, and others from the library of Coluccio Salutati. Cosimo had begun to rebuild the convent of San Marco for the Dominicani Osservanti in 1437. The distinguished collection that was being formed around Niccoli's books called for a distinguished container, which Cosimo supplied with the library he commissioned from Michelozzo in 1441-44.

Michelozzo gave the reading room at San Marco the form of basilica with the usual proportions reversed, that is, with wide side aisles for banchi and a narrow central aisle for circulation. The mendicant refectories and dormitories of the previous century supplied him with a model for this type of structure, one that was eminently practical for large codices chained to composite plutei-banchi. The basilical form was generated by the immobility of the book. Since the books could not be brought to the light, the light was brought to the books, streaming in through generous windows from courtyards on both sides. Fireproofing dictated vaults above and below. To support the vaults two rows of eleven columns each ran down the length of the room.

Michelozzo's furniture disappeared during the long sunset that lasted from the Napoleonic supression of 1808 to that of the Regno d'Italia in 1867, but we can get an idea of what it looked like from the Biblioteca Malatestiana in Cesena, which followed the Michelozzan model closely. Each bench was an ingenious composite piece of furniture, with a seat (banco) in front and a behind this a shelf (pluteus) on which the chained volumes were stored with a slanted reading ledge on top. Thirty-two plutei-banchi of fragrant cypress stood on each side of the San Marco library, 64 in all. Damaged by an earthquake in 1453, the library was repaired and a new room added, the bibliotheca parva or minor, with 14 more plutei-banchi.

With its generously spaced plutei-banchi, its restfull green walls (a color suggested by Isidore of Seville), its abundant light and its comprehensive holdings, the Biblioteca San Marco was an unusually pleasant place to read. The inventory of 1500 by the librarian Zenobi Acciaiuoli gives 1232 titles for an average of 16 books for each pluteus. From the beginning the library served two publics, Dominican students and a coterie of humanists. For the scholars, especially for the participants in the Accademia Marciana who gathered at San Marco, the library was a cultural laboratory where correct texts could be established and fellow humanists encountered.

[[Paradoxically the basilical library, designed for chained manuscripts, enjoyed its heyday during the first half-century of printing.]]

**Later Basilical Libraries**

The Biblioteca Malatestiana in Cesena was built in 1447-52 by Roberto Malatesta Novella, brother of Sigismondo Malatesta, tyrant of Rimini. The architect Matteo Nuti followed the model of San Marco on a slightly shorter site, with room for 29 plutei-banchi on each side,
installed in 1452-54. The Malatesta arms are carved on the capitals and desks and at the entrance one finds the family symbol of the elephant with the motto, "Elephas Indicus culices non timet." A scriptorium was set up in the library and continued to produce manuscripts, some of which were illuminated in Ferrara, until Malatesta Novello's death in 1465, when the library contained 200 volumes. In 1441 Malatesta Novello had appointed the comune of Cesena as joint guardian along with the Franciscans, and this durable administrative setup, along with the chains, insured that the library would survive almost intact (with only six books lost) to the present day.

Shorter basilical libraries of this period can be found at San Domenico in Bologna (1466-69), in the Benedictine monasteries of Monte Oliveto Maggiore near Siena (1513-16) and San Giovanni Evangelista in Parma (c. 1523), as well Santa Maria delle Grazie and San Vittore al Corpo (1508-25) in Milan. None of these libraries was as capacious as Michelozzo's library at San Marco, but when the age of incunabula ended in 1501 the number of printed titles had already outstripped the capacity of any basilical library to hold more than a fraction of them. The solution to the printing explosion lay in the grand salone with wall shelving, pioneered at the Escorial and the Ambrosiana. But before examining this new system we shall first turn our attention to the manuscript libraries of the Medici, the popes, the Duke of Urbino, and the King of Hungary. We shall then turn to two manuscript libraries of the second quarter of the Cinquecento, the Laurenziana in Florence and the Marciana in Venice, both architectural masterpieces that break with the conventions of the past without, however, pointing to the future.

**Biblioteca Medicea Privata: Cosimo, Piero and Lorenzo**

Cosimo de' Medici turned many of his books over to the Dominicans at San marco but gave others to his son Piero "il gotoso," whom he installed in the main apartment of the new Palazzo Medici on Via Larga, built by Michelozzo in 1446-52. Piero had began collecting and commissioning books around 1440, inspired not only by his father but also by Leonello d'Este in Ferrara. By 1450-58 Piero's library had grown to 105 books, and in 1463 he inherited the books of his bibliophile brother Giovanni as well. The biblioteca medicea privata became the finest private library of mid-century, specializing in high quality manuscripts in legible humanist hands with rich decoration.

Piero kept his books in the studietto on the piano nobile, a place of delectation of rare objects and fine books. Luca Della Robbia's twelve ceiling roundels and floor tiles of glazed terracotta made it a bright room, with light enough to read and to enjoy the decoration, "chon arte intera in tarsia e 'n pittura." Only trusted guests were permitted entrance and the books lay unchained on shelves. Color-coded bindings classified the volumes according to the medieval faculties, and on opening the unclasped covers a reader could learn the contents at a glance. The title page was an innovation of Piero's library. First appearing around 1461-62, it eventually developed into a
Such pages, highly decorated and often gilt, would be typical of Florentine quality book production in the later Quattrocento.

Lorenzo "il magnifico" inherited this library from his father in 1469. The stationer Vespasiano da Bisticci slowly won Lorenzo over as his primary customer. By 1472 we hear of a ten-volume Augustine just completed for Lorenzo, and an "inventione" of some sort for a library, which Vespasiano claims to have seen and shown to other bibliophiles. No library was built at this time but in the last years of his life Lorenzo took a more active interest in books. Stimulated by Poliziano, he was avid in his pursuit of Greek manuscripts. He acquired many of Francesco Filelfo's books after his death in 1481, and many more from book-hunting expeditions to Greece and Constantinople made his behalf by Janus Lascaris in 1480-82, and to monasteries in Italy by Pico della Mirandola and Poliziano in 1491. Lorenzo owned as many as 600 Greek manuscripts; dying young in 1492, he said that one of his great regrets was his unfinished Greek library. Bursting the seams of the studietto the biblioteca medicea privata remained in Palazzo Medici for only two years before it began the long odyssey that would take it to San Marco, then to Rome and then back to Palazzo Medici, before finishing in the Laurenziana a century after Vespasiano's first books for Lorenzo.

Vatican

When Boniface VIII moved to Avignon in 1305 his library was largely dispersed, and the pope who restablished the Santa Sede in Rome, Martin V, was not a systematic book collector. His successor, Eugene IV, moved to Florence in 1443 with 340 books, not enough to arm the Latin theologians in their disputes with the Greeks. It was left to Nicholas V (1447-55) to refound the papal library. While he was still a humanist cleric Tommaso Parentucelli advised Cosimo de' Medici by sending him the famous canone bibliografico, which guided acquisitions for the library at San Marco. The canone followed a long tradition. Augustine and Jerome, in De Civitate Dei and De viris illustribus, had offered canons of worthy authors, as had Isidore of Seville in his De libris et officiis ecclesiasticis. The genre was revived by Hugh of St. Victor for students in the monastic schools of Paris. For the Dominicans at San Marco Parentucelli stressed the ecclesiastical authors missing from Niccoli's core collection. Near the end of his life Cosimo would use the Parentucelli canone once again in furnishing his second great library at the Badia of the Domenicani Osservanti in Fiesole, built by Michelozzo in ****. Once he was elected pope this bibliophile was not to be outdone by his banker. His own notable collection already consisted of 1160 books, 353 of which were in Greek. He appointed a humanist librarian, Giovanni Tortelli. In 1450 he converted two rooms formerly used as a grainary on the ground floor of the Cortile del Papagallo of the Palazzo Vaticano into a larger and a smaller room, the "biblioteca" and the "camera." His ideal, nurtured in humanist Florence,
was a collection of archetypal manuscripts from which uncorrputed copies could be generated to educate the curia and the clergy at large. Finally the popes would have a worthy library: "bibliothecam condecentem pontificis et sedis apostolice dignitati."

The work of Nicholas V was continued by Sixtus IV Della Rovere (1471-84). Sixtus IV thought at first of a new building but eventually settled on an expansion of the existing library. Nicholas V's two rooms became the Biblioteca Latina, with 1757 manuscripts, and the Biblioteca Graeca, with 770 manuscripts, a total of 2527 books that grew to 3650 by the end of the pontificate. The public was admitted to both rooms. We can catch a glimpse of a papal visit in a fresco in the Ospedale di Santo Spirito. Storage amounted simply to laying the books flat on the top of tightly spaced desks, 16 in the Bibliotheca Latina and 8 in the Bibliotheca Graeca. We hear of 1728 chains ordered from Milan. Sixtus IV added a third room, the Bibliotheca Secreta, for rare manuscripts, and a fourth, the Bibliotheca Pontificum, for the papal archives, and he outfitted an apartment for the librarian and rooms for the custodes.

After the aniconic basilical libraries mentioned above the Vaticana of Sixtus IV was the first library to present a comprehensive decorative program. One entered the Bibliotheca Latina from the Cortile del Papagallo through a door studded with golden nails and framed in marble. On the opposite wall were two frescoes by Melozzo da Forli, an earlier one of 1474-80, now lost, showing the librarian Giovanni Andrea Bussi, and a later one of 1480-81, removed in 1820 and now in the Pinacoteca Vaticana, showing the librarian Platina kneeling before the pope and his nephews. Platina points to a long inscription in which the pope is praised for bringing the city back to life. Just as he revived the library he raised churches, streets, squares, walls, bridges, the Acqua Vergine, the port, the fortified Borgo and Vatican palace from squalor and decay. The walls were covered with a fictive green tapestry hung from red ribbons, while in the lunettes Domenico and Davide Ghirlandaio painted portraits of ancient sages along with fathers of the Church, each holding a scroll with an apt quotation from Diogenes Laertius or Augustine. The decoration of the Bibliotheca Graeca was more architectonic, with fictive green columns and a cosmatesque floor.

The library of Sixtus IV was convenient to the clerics and humanists who thronged the papal court but inconvenient for the pope, who lived on the top floors of the palace. Julius II (1503-13) installed a small personal library ("biblioteca nova secreta perpulchra...Pensilis Iulis" in the words of Albertini) of 220 books on a room that later came to house the papal court of the Segnatura. Raphael painted the four faculties by which medieval libraries were organized on the ceiling: Theology, Poetry, Philosophy and Jurisprudence. Under them theologians dispute the mystery of the Eucharist, poets sing with Apollo on Parnassus, philosophers both ancient and medieval surround Plato and Aristotle, and the decretals are presented to Justinian. The frescoes
show many books, as befitting a library; the figures who dispute and sing are unusually lively author portraits. Julius II's successor Leo X dismantled the library and changed the function of the room. In place of Julius II's shelves the lower reaches of the walls were lined with perspectival intarsie by Giovanni da Verona, which in turn were replaced under Paul III by the frescoed basement of Perino del Vaga that one sees today. Under the new name "stanza della Segnatura" the original library function of one of the most famous rooms of the Roman Renaissance was forgotten.

Leon Battista Alberti
A heavy user of the Vatican Library under Nicholas V was Leon Battista Alberti, who filled his commonplace books with citations from the ancient authors which he found there, like old pebbles re-used in a beautiful new mosaic, to use Alberti's own metaphor for literary composition. Alberti simultaneously loved and hated books. Like Petrarch before him Alberti loved the solitary dialogue with the book, but he also remembered wrestling with books as a student, until the letters turned to scorpions before his weary eyes. For the starving man of letters the library was a tomb and a prison. Alberti gives us the unseemly underside of Renaissance book-hunting in his satirical portrait of Niccolò Niccoli as Libripeta, Bookhound, a man ready to descend into sewers to get more books. Compared to the sumptuous manuscripts in the libraries of his patrons the few codices that can be identified as Alberti's own are modest and worn. But through his writings one catches a glimpse of his specialized shelves, some for the comic authors, others the many topics on which he wrote: the family, education of sons, and administration of the republic.

Alberti's De Re Aedificatoria is surprisingly reticent on the form a library might take. Perhaps one can read personal wish-fulfillment into his recommendation that in his country villa the patron have a library attached to his bedroom, separate from the bedroom of his wife, with a western exposure for reading at dusk. One imagines Alberti's lucubrationes and noctes insomnes, with reading aided by candlelight. He would have been the perfect customer for the machinery for reading multiple books that one sees in paintings by Giovanni da Milano, Botticelli or Ghirlandaio. As for the grand public library, Alberti mentions those of Athens, Alexandria, and the "Gordiani," but only as an afterthought in the context of magnificent public works, along with groves, pools, great stables, ports, and armories. He has no recommendations for the form of the library, other than to say that ancient and valuable codices were its chief ornament ("docta vetustas" is his highest compliment). He adds that the room might have portraits of the poets and mathematical instruments like an orrery. But elaborate painted programs, such as those of the Vatican libraries of Sixtus IV, Julius II and Sixtus V, were completely beyond his ken.

Urbino
Federigo da Montefeltro (1422-82) of Urbino and his friend Matthias Corvinus of Hungary resemble each other in their life of constant warfare combined with the cultivation of letters and architecture, in both cases culminating in a great palace with a celebrated manuscript library. Though destruction and dispersal were the fate of the Corviniana, the Montefeltro library remained untouched in its original room until 1657, and the collection is still intact in the Vatican.

The two years spent by Federigo between ages twelve and fourteen under the tutelage of Vittorino da Feltre in Mantua were formative for his love of reading and knowledge of Latin. He returned to Urbino in 1437 and assumed power as Conte after the assassination of his tyrannical older brother Oddantonio in 1444. The income from the condotta with Florence, Naples and the Pope brought large sums into this small bellicose duchy. Literate though not erudite, a voracious reader especially in the Latin literature on war, Federigo began serious book collecting around 1460. After the death of Cosimo Pater Patriae in 1464 he became the best customer of the Florentine stationer Vespasiano da Bisticci, whose illuminators and scribes, along with those of a local scriptorium that began to flourish in Urbino in the mid-1470s, helped build his collection. Federigo spent 30,000 to 40,000 ducats on books and accumulated over 900 manuscripts by the time of his death in 1482, including 168 in Greek and 82 in Hebrew, the latter plunder from the sack of Volterra in 1472.

The library occupied a room on the ground floor of the Urbino palace, in the north wing built by Luciano Laurana in 1465-72, the first room next to the entrance androne. An inscription over the library door, composed by the scribe-librarian Federigo Veterani, described the arrangement of the books inside: four bookshelves on the right for sacred literature, law, philosophy and mathematics, and four on the left for geography, poetry and history. Though the shelves have vanished the vault still shows the Montefeltro arms, an eagle inside an oak wreath and a ring of stucco seraphim; the whole device is set in a starry sky and generates fiamelle of light that radiate over the vault in ever widening circles. There was also a table and a tall bronze lectern with the Montefeltro eagle, today to be found in Urbino Cathedral. Light entered through a pair of windows giving onto the piazza, one splendidly enframed and the other cleverly concealed in the splendid stone facade that Francesco di Giorgio applied over the brick facing of the Laurana wing in 1474-82.

There was a door to a second room and other spaces, possibly containing the scriptorium and the "bibliotheca alia" where manuscripts of lesser quality were kept. There were also a small number of printed books, notwithstanding Vespasiano's claim that Federico had none ("in quella librarìa i libri tutti sono belli in superlativo grado, tutti iscritti a penna, e non ve n'è ignuno a stampa, chè se ne sarebbe vergognato, tutti miniati elegantissimamente, et non v'è ignuno che
non sia iscritto in cavetto." They were shown to elite visitors of authority and learning, while the librarian was instructed to keep at bay the "inepti et ignoranti, immundi et stomacosi" and to guard against pilfering the unchained books when groups visited.

In Piero de' Medici's palace library and studiolo were one and the same, but in Urbino the two were separated, with the library in the public realm of the palace on the pian terreno and the studiolo in an intimate recess of the ducal apartment on the piano nobile. In this small, almost lightless room intarsie of incredible intricacy and beauty create the fiction of intimacy. The warrior turned princeps pacificus is shown standing behind a curtain, dressed in a toga and holding a spear upside down. He seems to have carelessly doffed sword and armor, laid aside the Garter and left books in disarray. Instruments of astronomy and music are also shown, by which the well-read prince will be raised to the stars, as his motto claims (virtutibus ad astra).

The prince is also shown in a dynastic portrait by the court artist Justus of Ghent which shows the duke reading, with his one good eye, a book recently identified as the Moralia in Job of Pope Gregory the Great. Federico wears the regalia that came his way in 1474, the Aragonese Order of the Ermellino and the English Order of the Garter, while on the shelf, directly over his young son Guidobaldo, is the helm of the Confalonerius Sanctae Romane Ecclesiae, conferred by Pope Sixtus IV in the same year. The portrait epitomizes Federigo's peculiar synthesis of books and power.

Federigo da Montefeltro died in 1482 and Guidobaldo, lacking his father's fame as condottiere, suffered a disastrous decline in income. The Urbino library was plundered by Cesare Borgia in 1502 but 59 cases of books were returned, stripped of their silver and jewel-studded covers, in 1504. Francesco Maria I della Rovere temporarily removed the library when driven from the duchy by the Medici in 1516 but brought it back in 1520. In 1607–09 the last della Rovere duke, Francesco Maria II, built a large library meant to illustrate the entire history of printing. It was installed in a purpose-built wing of the ducal palace in Castel Durante (later renamed Urbania), with shelving designed by Nicolò Sabbatini, who later achieved fame for his treatise on scenography. Realizing that the duchy would revert to the papacy the duke made elaborate provisions to keep both libraries in place and they remained secure for a generation after his death in 1631. But in 1657 Pope Alexander VII moved the manuscript library from Urbino to the Vatican, while in 1667 he moved the printed books from Urbania to the empty shelves of Borromini's Biblioteca Alessandria at the Roman Sapienza, since, in the pope's words, "la Vaticana è come un mare nel quale è dovere che vadino a colare tutti li fiumi." (BAV, Barb.lat 6497, fol. 76r)
Matthias Corvinus (1443-90)
Federigo da Montefeltro's only match as bibliophile was Matthias Corvinus, crowned king of Hungary in 1464. While he inherited no more than a hundred books from his Hunyadi forebears, he was inspired to become a book collector by the example of his humanist tutor János Vitéz and that of Vitéz's Italian-educated nephew Janus Pannonius. After their disgrace in 1472 some of the former's and most of the later's books, including many Greek manuscripts, were absorbed into the royal collection, doubling it in size. Matthias's second wife, Beatrice d'Aragona, had arrived in Buda in 1469 with a library of her own and the ideal of a royal library formed in the Aragonese court of Naples. If the library had reached a thousand books by 1484, its great expansion occurred in the last lustrum of Matthias's life, beginning with his conquest of Vienna in 1485. It was presided over by the learned librarian from Parma, Taddeo Ugoleto, who collected books in Ottoman-occupied Greece and in Florence. There he competed with Lorenzo de' Medici in commissioning sumptuous manuscripts from Vespasiano and in employing illuminators of the highest class, such as Attavante degli Attavanti. The growth rate of the library has been estimated at 50 manuscripts a year prior to 1485, but it might have risen as high as 150 a year by the time of Matthias's death in 1490, bringing the total perhaps to 1500 or 1600 manuscripts, plus 300 to 400 printed books. Some manuscripts still in preparation at the time of the king's death in 1490 were delivered to his successor Vladislas, but about 150 still unpaid for were retained in Florence. But even without them Matthias had formed the largest library in Europe after the Vatican.

The library was located in two vaulted rooms on the piano nobile of the Buda palace near the chapel, overlooking the Danube, a smaller chamber for Greek and oriental manuscripts and a larger chamber for Latin manuscripts. The most precious illuminated codices were exhibited on tables or on three rows of gilt shelving lining the walls, while less precious volumes were kept in chests below them. The traveller Pigafetta saw many pictures and inscriptions in the library after the sack of 1526. There was a couch between two colorful windows for the king to read or engage in discussions with humanists. The Gothic vault of the main room was decorated with a constellation of stars reflecting the coronation of Matthias as king of Bohemia in 1469. Like Federigo da Montefeltro, splendid illuminated books and the image of the humanist prince went hand in hand with military glory.

The library suffered losses under Matthias's successor Vladislas Jagello, especially through diplomatic presents. The vast bulk of what was left seems have been plundered after the defeat of the Hungarian army at Mohacs, when Suleiman II captured and sacked Buda on 8 September 1526. Queen Mary of Burgundy escaped with one missal, now in Brussels. Even though Suleiman left a Hungarian puppet in Buda and there was a Hungarian court from 1526 to 1541, the library seems to have been dispersed. Travellers describe the room but not the books. The
reports of books being guarded by the Turks in the early seventeenth century seems to refer to a hoard of ecclesiastical books kept in the cellars of the palace; three hundred of these books were removed to Vienna in 1686. Whatever books were taken to Constantinople they suffered from neglect. In 1869 and 1877 the reforming Ottoman sultan, Abdul Hasid, returned 16 Corvinus manuscripts to Hungary, perhaps a hundredth of the quantity that was carried off from Buda.

**Laurenziana**

In 1494, two years after Lorenzo's death, the Medici were expelled from Florence and their private library confiscated. About a third of the books were dispersed to settle Medici debts while the remainder were stored at San Marco. They were redeemed by Cardinal Giovanni de' Medici in 1508 and moved to his palace in Rome, where they were put at the disposition of scholars in a room decorated with fine statues, including a satyr. Giovanni was elected Pope Leo X in 1513, but it was not until his cousin Giulio de' Medici became Pope Clement VII in 1523 that action was taken to build a library. Within a month of his election, Clement VII had invited Michelangelo to design a splendid library at San Lorenzo in Florence. Thus it fell to this illegitimate scion of the house to canonize four generations of Medici book collecting and give the books a stable home in Florence.

If 1136 manuscripts had been taken from Palazzo Medici in 1494 and 1016 (of which 431 in Greek) were brought to Rome by Cardinal Giovanni, the number that Clement VII sent back to Florence in 1524 totaled about 1200, not much bigger than the collection of Federigo da Montefeltro. But Clement VII insisted on a monumental container, on the scale of Michelozzo's library at San Marco. To impose such a space on the canonry of San Lorenzo was difficult, and in the end Michelangelo offered a radical solution. He put a room as long as Michelozzo's on top of the residential wing of the San Lorenzo canons, adjacent to Brunelleschi's New Sacristy. Here it could enjoy light and air, but a vault was out of the question, as were columns and arches like those at San Marco. Reluctantly the patron agreed to cover the room with a wooden roof and coffered ceiling. Michelozzo had put 64 plutei-banchi in the San Marco library, 32 per side, but Michelangelo crammed 88 of them into a room of about the same length, 12 more per side. His plutei-banchi, with their upright central piers, low seats and vertical backs are close-packed and anti-ergonomic, enforcing uprightness on the aching body of the reader. Wooden furniture, grey pilasters of pietra serena, wood ceiling and terracotta floor are all tied together in a unified system.

Clement VII's original program also called for a chapel, a library for Lorenzo's Greek books, and four studietti for exceptionally precious works. Instead Michelangelo offered a libreria secreta at the end of the long salone. Here property lines dictated the triangular plan that we see on his two surviving sketches, done in January 1526. Never built, this strange room was designed with a
cupola rising over windowless walls and a triangular maze of banchi with a "banco tondo" in the middle, like the altar in a central church.

To reach this rooftop library one had to climb the existing stairs to the upper level of the cloister, but the library was set three meters higher, requiring fifteen or sixteen more steps. Three canons' rooms were sacrificed for a ricetto to contain a staircase. The ricetto was to have both a basement zone with stairs and an upper zone with pilasters, above which Michelangelo planned a ceiling with glazed oculi. In the course of the design the pilasters were transformed into columns immured in deep grooves in the wall, 24 in all, more than in the entire Biblioteca San Marco, which had only 22. The basement is enlivened with 24 colossal and capricious volutes. The expressive frames set into the walls may be thought of either as lightless windows or as statueless niches.

When Michelangelo left Florence for Rome in 1534 the ricetto had been built but there was still no staircase. In the mid-1550s Duke Cosimo charged Vasari to finish the building. To Vasari's insistent letters the reluctant Michelangelo replied that he remembered the design dimly, as if in a dream, as a series of ovals of diminishing size rising up to the threshold of the salone. In 1558 he produced a clay model which he sent to Bartolomeo Ammanati to guide him in the execution of the most complex, even perverse, stairs in the history of architecture. A central flight of stacked ovals rises up to the threshold of the door to the salone, while two side flights cluster around the central flight and join it two-thirds of the way up.

By the 1550s the Laurenziana had become Duke Cosimo I's showpiece, an affirmation of Medici dynastic continuity after sharp reversals of fortune. The windows, floor and ceiling bear his devices. When the library was opened in 1571 the books were arranged on the plutei-banchi by Cosimo's personal physician. **In 1574 four orreries showing the various world systems, the "teoriche," were mounted on the plutei with astronomical and mathematical manuscripts, a desideratum that had been expressed as early as Alberti's De Re Aedificatoria.** There was no rare book room, but now, in the second century of printing, the whole salone was in effect a rare book room, full of precious chained manuscripts. Francesco Bocchi called them the "anima gentile" residing in the "gentile membra" of Michelangelo's architecture. Michelangelo never returned to Florence after 1534 and died in 1564 without ever seeing the furnished library. The artist who remembered Lorenzo de' Medici and Clement VII never overcame his antipathy to Cosimo. One can detect a note of irony about the regime in Michelangelo's description of the central steps reserved for "el Signore" and side steps for "servi." This was not the way he remembered Lorenzo and Poliziano going to look at books.

**Biblioteca Marciana in Venice**
The other unconventional manuscript library of the mid-Cinquecento is the Biblioteca Marciana in Venice, built by Jacopo Sansovino (1486-1570) between 1537 and 1553 and completed by Vincenzo Scamozzi in 1581-88. In contrast to the Laurenziana, which is hidden in a cloister, the Marciana proudly exhibits one of the most sumptuous facades of the Renaissance and defines one of the most prominent public spaces in Italy. It is a two-story structure made of arches with attached half-columns, Doric and Ionic, like the first two stories of the Colisseum, but with an infinitely richer array of sculpture. A classical pendant to the Gothic Palazzo Ducale, it shapes the Piazzetta into a forum all'antica for the Serenissima's practice of Justice, reception of foreigners and marriage to the sea.

The Marciana was built to house the collection of 1024 manuscripts, largely Greek, that Cardinal Basilius Bessarion (1403-72) had given to the Senate in 1468. The books lay in crates until the appointment of Pietro Bembo as librarian in 1530 and Sansovino as architect in 1537. A collapse of the ceiling in 1545, when the building was six bays long, slowed work, but by 1554 the library was completed. **The entire building was finished in 1580-87 and was twenty-one bays long, eleven on the side of the campanile for the library and vestibule, and ten on the side of the baccino for the treasury and meeting hall of the Procuratori di San Marco.**

The staircase leading to the library on the upper floor was decorated in 1553-59 with stuccoes by Alessandro Vittoria and frescoes by Battista Franco and Battista Del Moro, alluding to the ascent of the spirit of man under the influence of the planets and elements. The visitor climbs to a vestibule with a ceiling fresco by Titian, showing an allegory of Sapienza with book and ring (for Eternity) in a temple formed by a perspective of columns. Finally one enters the library proper, a long well-lit salone with frescoes on the walls between the windows by Veronese, Tintoretto and Andrea Schiavone. Two females depicts Faith and Charity but the rest show evangelists or the great philosophers of antiquity standing amidst piles of books or wrestling with open books like Michelangelo's prophets in the Cappella Sistina. Most remain generically exotic bookmen who resist identification.

For the shallow vault Titian and Sansovino devised a program of allegories representing the twenty cattedre of the Accademia attached to the library. The twenty-one coffers were carried out by seven painters awarded three coffers each. If rules were given the painters followed them only loosely. Some figures are straightforward allegories (Theology, Philosophy, Sculpture, Mathematics, Geometry, Astrology, Arithmetic, Music). Others are deities (Mercury and Pluto as Physiognomy, Athena and Hercules as Military Science, Diana as the Hunt, Pomona Ceres and Vertumnus as Agriculture). Others are virtues (Virtue disdains Fortune and Chooses Prudence, Justice and Patience, Vigilant Justice, Honor). The first three coffers near the vestibule are complex and ambitious (Natural Philosophy, Theology with Hebrew Scrolls and a
Cross, Nature asking Jove's Permission to produce All Things). The last triplet shows the paths open to noble youth after their education (Government, the Church, the Military).

Little is known about the arrangement of Bessarion's books. Thirty-eight banchi are mentioned in an inventory of 1575, presumably arranged in two rows of nineteen each. Bibles and theology probably were placed near the entrance but otherwise the correspondence between titles and ceiling allegories must have been casual.

The building was continued by Vincenzo Scamozzi after Sansovino's death in 1570. In 1582 he began the last five bays, which run along the flank of Sansovino's other building, the Zecca. Scamozzi finished the statue-crowned balustrade but was refused permission to add a third story. He made the vestibule more sculptural and architectonic, removing the wall paintings and adding columns, aediculae, and doorframes. He filled the room with 234 ancient statues from the collections bequeathed to the Republic by Cardinals Domenico and Giovanni Grimani and Federico Contarini. The vestibule was thus furnished all'antica for the academies of noble youth who had been assembling in the library since 1560. By the end of the century the Accademia Venezia (or della Fama) was held in the main salone, while school instruction for younger nobles was held in the statue-packed vestibule. With its twenty cattedre formed into four colleges (Law, Philosophy, Mathematics, Humanism) the Accademia offered a civic education to patrician youth. In contrast to the aniconic, statueless Laurenziana, the Marciana was a place where art and books shared an educative role, like the mouseion of ancient Alexandria.

Bibliography
Both the Laurenziana and the Marciana were fundamentally manuscript libraries, even though the age of printing was entering its second century when they were completed. The number of books published by 1501, the end of the era of incunabula, has been estimated to be 40,000, with tens of millions of volumes in print. The science of bibliography arose in response to this exponential growth. It began with a list of a thousand authors compiled by the young abbot of Sponheim, Johann Tritheim, in 1494. But the father of modern bibliography was the Swiss botanist and zoologist, Konrad Gesner (1516-65). Traumatized by the Ottoman sack of the library of Matthias Corvinus at Buda and convinced that shipwreck was threatening the heritage of the classical past, Gesner put aside his scientific research and began to visit bookfairs and libraries all over Europe. His Bibliotheca Universalis of 1545 lists 12,000 works in Greek, Latin and Hebrew, while an appendix published in 1555 raised this to 15,000 works by 3000 authors. Numerous as this sounds, it has been estimated to be a quarter of the total of works in these languages. Works such as Gesner's, supplemented by bibliographies in the vernacular languages, were to pave the way for the great salone libraries of the late Renaissance Milan and early
Baroque Rome. But the salone library first appeared in Spain in a regal library that all learned men heard of but few ever visited, the library of Philip II at the Escorial.

**Escorial**
The initial idea for a Spanish royal library came from a memorandum drafted for the newly crowned Philip II by the humanist Juan Paez de Castro. Although he advocated a site in Valladolid, the seat of the court and university, Philip II chose instead the village of El Escorial in the foothills of the Guadarramas hills outside Madrid. El Escorial was built in this remote site by the architects Juan Bautista de Toledo and Juan de Herrera in 1563-84. Philip II entrusted the foundation to the Jerolomites, an order not known for learning. Amidst fears in learned circles that Escorial would be a tomb for books, the first shipment of 2820 manuscripts and 1700 printed books was turned over to the monastery in 1575, soon followed by the bequest of 900 manuscripts of Diego Hurtado de Mendoza, while local illuminators produced breviaries, missals and choirbooks for monastic use.

El Escorial has two church facades, the actual facade of the church of San Lorenzo, which stands in the main courtyard, and a fictive facade on the outside of the monastery. The library was placed behind the upper story of this second facade. It served as a bridge between the convent and the college, and was said to be the place where the whole community met. We have a description of the library written in 1600 by the second librarian, José de Sigüenza (1544-1606), who took over after the death of Benito Arias Montano (1527-98). He claims that the shelves, made of cypress and cedar mixed with woods from the Indies, are the most precious that exist in any library. Following the example of the library of Ferdinando Columbus, son of the Navigator, built in Seville prior to 1539, Montano shelved the books with the spines inwards and the authors' names written on the gilt outer edges of the pages. Sigüenza remarks that the whole room from floor to vault seems painted or colored in gold. Remarkably it is printed books that are given such lavish treatment. Sigüenza estimates the capacity of the room at 7000 books, or 9000 if one counts separate volumes bound together.

The shelves were kept low to leave space for a cycle of frescoes by Pellegrino Tibaldi (1527-96) and Bartolomé Carducho (1554-1608), following a program drawn up by Sigüenza. Tibaldi painted allegories of the seven liberal arts in the barrel vault, while in the spandrels he depicted authors associated with each art, mostly ancient but some Christian and Spanish as well. Above the shelves Tibaldi frescoed stories associated with the liberal arts, such as the Death of Archimedes near geometry, the Tower of Babel near grammar, or Hercules Gallicus near rhetoric. Sigüenza goes on to describe the second room above the first, with many portraits of popes and authors above the shelves. Here could be found many maps, globes, armillary spheres, mathematical instruments as well as coins and medals. There was a separate room for
manuscripts. Overall Sigüenza estimates the contents of the library in 1600 at 14,000 to 15,000 books.

Tibaldi carried news of the Escorial with him when he returned to Milan to work for Carlo Borromeo, and Carlo's nephew Federico Borromeo absorbed its lessons when he built the Ambrosiana. **Later Tibaldi's idea of personified liberal arts would influence Claude Clément, author of a Jesuit library treatise in 1635. (Masson 1981, p. 22)** More immediately the influence of the Escorial, and in particular of its librarian, Arias Montano, and his polyglot Bible can be felt in Parma, on the decorative cycle painted on the walls and vault of the Benedictine library at San Giovanni Evangelista in 1573-75. It is one of the first emblem-filled libraries of the Counter Reformation and the first to insist on maps as an integral part of the decoration.

The prints of published by Pierre Perret in 1589 made the Escorial known to a wider world. It was visited by Cardinal Francesco Barberini and his entourage, including Cassiano Dal Pozzo, in 1626, but it was never easy of access. A third of its 18,000 books perished in the disastrous fire of 1671 and no more books entered the monastery after 1700, when Philip V founded a royal library in Madrid.

Salone Sistino of the Biblioteca Vaticana

By the later Cinquecento the Vatican library had outgrown the four rooms of Sixtus IV. Gregory XIII at first considered building a new library in the west wing of the Cortile del Belvedere, beneath the Galleria delle Carte Geografiche, for philosophy, theology and law, while profane learning would be left in the old rooms. We hear of a planned decorative program including the Doctors of the Church as well as ancient authors, along with a bronze statue of Christ. But the new library was to be built in a different place, not by the pope who reformed the calendar but rather by the pope who moved the obelisks.

Sixtus V (1585-90) had Domenico Fontana build the library in the middle of the Cortile del Belvedere, destroying the steps that formed the theater of Pius IV. Removal of classical statues and destruction of spaces with pagan overtones was part of the new Catholic triumphalism. The facades of the new library were covered with sgraffito decorations pertaining to virtues and the usual disciplines along with lions and pears, symbols of the Peretti pope. Inside there was an enormous salone, over 70 meters long, with a vault resting on six massive piers running down the center. For the first half-century of the library the old desks of Sixtus IV were re-used, but in 1645 they were sawn up to make closed credenzoni for books clustered at the base of the central piers.
Access to the books was limited, but the great illustrated book of the salone was open for all to read. In 1588-90 Giovanni Guerra, Cesare Nebbia and a team of over fifteen painters carried out four fresco cycles in the Salone Sistino. The first shows the inventors of alphabets, painted on the twenty-four faces of the six piers, beginning with Adam and ranging through gods, erudite pagans and biblical figures who invented alphabets for ebreo, egiziano, siriaco, caldeo, greco, latino, gotico and illirico. Inspired by Polydore Virgil's work on invention, the series shows the foundations that made Christian learning possible and culminates in Christ, the Alpha and Omega. Alphabets recall the Vatican printing press and the Vulgate Bible, a project close to Sixtus V's heart. Bible and fresco program were both guided by the learned Oratorian, Silvio Antoniano, and the typesetters had rooms on the floor above the Salone Sistino.

The second cycle, great libraries of the ancient world, painted on the south wall facing St. Peter's, culminates in a fresco showing Domenico Fontana presenting a plan of the Vatican Library to the pope. The third cycle, a double one showing the eight ecumenical councils before the Schism and the eight synods of medieval and modern times, adorns the north wall facing the garden. In it truth is affirmed, heresy condemned, Arian books are burned, and Constantine affirmed as the paradigmatic emperor who donated his lands to the Church. The fourth cycle, the streets of Sistine Rome and the obelisks, decorates the vault and shows the creation of Roma Felix. In the old library of Sixtus IV Melozzo's fresco alluded to the renewal of the city in an inscription, while here the Sistine city is shown as in an illustrated book.

Ambrosiana
At the end of the sixteenth century neither the Laurenziana, a shrine to manuscript culture, nor the Vaticana, an illuminated tomb for books, pointed to the future. Instead the lead was taken in Milan with the foundation of the Ambrosiana in 1603. Cardinal Federico Borromeo had formed a large personal library in Rome and had later absorbed the books of Carlo Borromeo. He treasured printed books and even ephemera that would one day be as rare as manuscripts. He had little use for Latin manuscripts, except for the very old, but avidly collected Greek manuscripts and those in the Biblical and "barbarian" languages, such as Armenian, Persian, Arabic and Abyssinian. He sent agents to Greece and the Levant, outbid the Jesuits for famous book collections, and bought from Cardinal Cusani the manuscript that would become the talisman of the Ambrosiana, Petrarch's Virgil with Simone Martini's frontispiece.

The Ambrosiana was built in 1603-09 on a site, said to be the forum of Roman Milan, next to the church of San Sepolcro. Lelio Buzzi provided the design while Fabio Mangone and Francesco Ricchini were involved in the final stages of construction and decoration. One passed through a vestibule in the form of a small classical temple to enter a grand salone containing, when the room was opened, 30,000 books: "una sala di tal grandezza affine che tutte insieme raccolte
 scorger si possano." Readers were welcomed with comfortable seats, pen, paper, and ink, and would immediately note that the books were not chained. A ballatoio with a parapet made out of portraits of poets and litterati ran between the none lower and twelve upper shelves, while at the very top there was a series of uomini illustri. The room was covered with a grand barrel vault and lit through semicircular windows at either end. Fifteen thousand manuscripts were shelved in adjacent rooms. Federico Borromeo imagined an educated clergy emerging from this library, along with scholars and missionaries, soldiers in the fight against heresy. He opened a Museum in the same building in 1618 and an Academy for painting, sculpture and architecture in 1621. But the wars that devastated Spanish Italy brought stagnation to the culture of books so ambitiously begun by Federico, and the baton passed to Rome, an island of peace in a continent at war.

Baroque Rome
Ludwig von Pastor, the historian of the popes, found records of thirty-six family libraries in Rome, most dispersed by 1900. But there were also libraries formed by the counter-reformational orders, in particular the Jesuits. The Collegio Romano had a vast library in form of two long corridors that crossed each other in the middle, the famous crociera, built in 1626. There were also libraries at the Casa Professa and the novitiate of S. Andrea al Qirinale.

The most important Roman library after the Vatican was the Barberini Library, installed in 1631-33 in a rooftop room in the new palace at the Quattro Fontane, with magnificent shelves designed by Giovanni Battista Soria. A magnificent parade of ionic columns supported a ballatoio for access to the upper shelves. The carved decoration included Barberini symbols like the rising sun, bees and laurel, and there were wooden vases with wood bouquets, inspired by Barberini floral culture, best represented by the learned Jesuit Giovanni Battista Ferrari. The parterres with rare and exotic flowers in the garden were best read from the windows of the library, like the pages of a book. Leon Allacci published his Apes Urbanae in 1633, a bibliography of the authors in the Barberini circle. In Ferrari's metaphor these favored literati clustered around the Barberini library just as bees reproduced the Barberini arms every time they clustered around flowers.

The Barberini model was propagated in Rome in the libraries of Francesco Borromini, especially the Biblioteca Vallicelliana of 1642-44, installed like the Escorial library behind a fictive church facade, and the Biblioteca Alessandrina alla Sapienza of 1659-66. The longest of all the salone libraries of Rome was the Biblioteca Casanatense, founded by Cardinal Girolamo Casanate (1620-1700) with a bequest of 160,000 scudi and 25,000 books. Rome, however, had no monopoly on the salone library, which achieved monumental form in other centers of learning as well. Perhaps the most notable examples are the Benedictine library at San Giorgio Maggiore in
Venice, built by Baldassare Longhena in 1641-53 to replace the fifteenth-century library originally endowed by Cosimo de' Medici, and the late baroque library of the Gerolamini in Naples.

The influence of the Barberiniana can also be felt as far as Paris, especially in the libraries of Cardinal Jules Mazarin. Giulio Mazzarini to his Sicilian-Roman family and his early Barberini patrons, this versatile diplomat advanced simultaneously through the curia and the French power structure, gaining the red hat in 1641 and effectively functioning as the first minister of the young King Louis XIV from 1643 until his death in 1661. The collection was formed by Mazarin's librarian, Gabriel Naudé, a Barberini protégé and author of a treatise on library science, L'Avis pour dresser une bibliothèque (1627). The books were installed in 1646-47 by Mazarin's architect Le Muet over the stables of Mazarin's palace, the former Hôtel Tubeuf on Rue Richelieu. The two stories of shelving running down a gallery 56 meters long, lined by 54 Corinthian columns, were like the Barberini shelves but even more splendid. In the popular imagination it was the "bibliothèque des colonnes." The library was auctioned off during the Fronde of 1652, partly bought back and augmented up to Mazarin's death. In 1668 the shelving including the Corinthian columns was moved to the new Bibliothèque Mazarine in the Collège des Quatre-nations, built with money from Mazarin's testament by Louis Le Vau in 1662-72. Here the spirit and to some extent the form of the Barberiniana lives on.

Conclusion
Five themes may be traced from the humanist library of the early Renaissance through the great salone libraries of the Baroque: the birth of the princely library, the demise of the chained library, the ideal of the public library, the revival of the ancient author portrait, and the growing proximity of library and Kunstkammer.

For the humanist it was the possession of codices of venerable antiquity that guaranteed the worth of a library. However, in the later Quattrocento this standard gave way to the collecting and commissioning of splendid illuminated manuscripts in princely libraries. The right to rule of Federigo da Montefeltro and Matthias Corvinus was justified by their collections of regal books. Astrological sanction for their regimes was depicted on their library vaults. Cosimo il Vecchio de' Medici, more a true bibliophile than his princely contemporaries, sealed his patronage of religious orders, at San Giorgio Maggiore in Venice, San Marco in Florence, and the Badia in Fiesole by building a magnificent library. In the hands of his descendants the biblioteca Medicea privata became a talisman of family continuity over the shipwreck of exile and assassination. It was an illegitimate scion of the house, Clement VII, who began Michelangelo's Laurenziana and Duke Cosimo, who had clawed his way to power as the head of minor branch of the family, who
brought it to completion. By the time of bibliophile dynasts like Urban VIII and Cardinal Mazarin, a great library was both the outcome and the sign of power.

During the entire first century of printing the libraries of the Renaissance were still chained libraries for manuscripts. Bench and book were inseparable, and it was the reader who moved, not the book. Crowded benches went hand in hand with silent reading, a practice that had been gaining ground since the late Middle Ages. In the late Renaissance there were a variety of responses to the increasing numbers of books short of unchaining them. The library of Leiden University, founded in 1594, asked its readers to consult books standing at chest-high desks where the chained volumes were shelved upright, not lying on their side as in earlier humanist libraries. In 1589-90 Merton College Oxford and Hereford Cathedral library adopted the stall system, which was followed shortly afterward by Thomas Bodley when he reconstituted the delapidated library of Duke Humphrey at Oxford in 1598-1602. Stalls were multi-purpose pieces of furniture that projected out from the walls and provided two or more shelves for chained books plus projecting desks on either side for reading. As books multiplied the stalls grew taller, forming alcoves, miniature rooms within the larger library room, which are typical of the English college library in the baroque period. Tall alcoves in a majestic room were a feature of Christopher Wren's library at Trinity College Cambridge, begun in 1676.

However, the way of the future for continental libraries lay rather in a much simpler system, namely wall shelving, at first rising no higher than a man could reach, then raised much higher and provided with a balcony to reach the uppermost books. We find wall shelving rising to eye level in the short-lived private library of Julius II in the stanza della 'Segnatura', and then in the vanished library of Ferdinando Columbus in Seville. But it was Juan de Herrera who first ennobled wall shelving with an architectural order in the Escorial, thus reviving the form of the great libraries of antiquity. Wall shelving without chains in capacious rooms finally allowed the printing revolution to be accomodated in library design. The chained libraries of the early Renaissance had no room for the small books that came pouring forth from the Aldine and other presses. A solution was finally found in Oxford, in the new Arts End added by Thomas Bodley in 1610-12 to Duke Humphrey's library at Oxford. The large folios and quartos were chained to the lower shelves, while the small octavos were shelved unchained on the upper level, where access was restricted. Revolutionary for its day, the Ambrosiana was built in 1603-09 without chains.

The public library saw an early dawn in the library of San Marco in Florence, but a fuller realization of the ideal was achieved simultaneously in the early Seicento in three centers of learning: Oxford, Milan and Rome. Thomas Bodley's name for his foundation was 'The Publique Librarie in the Vniversitie of Oxford'. From the beginning this 'ark to save learning
from the deluge' (Francis Bacon), was open to 'extranei' as well as students. The Ambrosiana in Milan was founded by Cardinal Federico Borromeo in 1603 to produce educated clerics, but it was open to all qualified readers. The Biblioteca Angelica in Rome was founded in 1595 by Angelo Rocca (1545-1620), the Vatican librarian of Sixtus V, with a donation of 20,000 books to the convent of Sant'Agostino. Rocca intended the library not just for the Augustinians but for all lovers of learning, 'For Whoevert Wishes' ("Tois Boulomenois / Volentibus") as the inscriptions over the door proclaimed. Rocca thought of his library as a way of leveling distinctions between rich and poor, city and country. His books would be a kind of alms-giving of the mind, and he wanted to be remembered as an angel of light, pushing back the darkness.

One feature of ancient libraries that was well known to Renaissance humanists was the author portrait. Poggio Bracciolini has Lorenzo de' Medici say that Cicero, Varro, Aristotle and others had effigies of great men in their libraries to ennoble and inspire their owners. The Farnese librarian, Fulvio Orsini, brought most of the relevant texts together in his Imagines of 1570, a book about ancient portrait busts but also about ancient library culture. In 1569 the Portuguese humanist Achilles Statius explained that looking at the faces of authors was like looking at our relatives or at a mirror of ourselves. Writing in 1607 Justus Lipsius thought the effigies of great men were worthy of contemplation in a library since their bodies were hospices for their souls. In 1627 Gabriel Naudé wrote that they are images not of the bodies but of the spirits of galant writers, which could excite the well-born soul to follow in their path and remain firm in some noble enterprise. Junius in his treatise on ancient painting thought it appropriate to have images in gold, silver and brass to inspire in the reader religious horror of the sort that Quintilian felt in consecrated groves. Rembrandt's Aristotle shows the ancient philosopher, the founder of a science of library management, contemplating a bust of Homer in a library. Although the books are not chained he is, bound by the golden catena d'onore to the service of a fickle prince, while the Homer he contemplates is blind but free.

On the other hand the religious orders often used the author portrait in a doctrinaire way. The Oratorians assembled many prints of authors in the new library Borromini built for them in 1642-44, but only one, Cesare Baronius, was given a marble bust. Jesuits libraries tended to feature portraits of Jesuit authors, as did those of most of the religious orders. An unusual twist to this theme is the idea of Claude Clément, a French Jesuit writing in 1635, that telamones both of good and bad authors should support the shelves appropriate to their subject matter. This advice was taken seriously in the Dominican library of Santi Giovanni e Paolo in Venice, built in 1679-81. The ceiling frescoes showed Dominican theologians, while Piazzetta's shelves rested on the backs of the great heresiarchs, whose faces expressed various degrees of hate and rage. In the Biblioteca Casanatense in Rome, built by Antonio Maria Borioni in 1700-25, the sole author portrait is a bust of Thomas Aquinas by Le Gros: "Mille libros, hospes, quid quaeris cernere?"
Thomam / Suspice, major enim Bibliotheca fuit."  ("Why, Visitor, do you try to discern a thousand books, regard Thomas, for he was a greater library.")  Fortunately the encyclopedic character of Cardinal Casanate's collection, including many oriental books, belied the campanalistic tone of the inscription.

Alberti's advice to display mathematical instruments and orreries alongside books opened the door to the conjunction of library and gabinetto di curiosità.  Piero de' Medici's library and studiolo, kept together in Palazzo Medici until the death of Lorenzo in 1492, was the first of many such conjunctions.  Mathematical instruments, Greek vases and antique bronzes surround Augustine in his study in the painting by Carpaccio.  Scamozzi advised adding globes and musical instruments to the library, and in 1582 he converted the vestibule of the Marciana into a museum for the Grimani collection of ancient sculpture.  The Barberini collection of natural wonders was kept in rooms adjacent to the library, built in 1631-33.  When Fischer von Erlach built the Hofbibliothek in Vienna in 1722-30, two cabinets of curiosities were placed at the entrance.  The most striking example of this combination to survive from the late baroque world can be found in the Strahov Monastery in Prague.  Here the library of the Premonstratensians, with a Theological Hall built in 1679 and a Philosophical Hall built in 1782, was enriched by the curiosity collection of Karel Jan Erben in 1798.  On a more theoretical level Godfried Wilhelm von Leibniz (1646-1716), librarian in Hannover and Wolfenbüttel, championed the union of Kunstkammer and library as spaces where research informed by wonder would expand knowledge beyond all previous limits.  In this sense he is perhaps Alberti's most brilliant heir.