The Woven Prayer Book
Cocoon to Codex

Matthew J. Westerby
The Woven Prayer Book
Cocoon to Codex

Matthew J. Westerby
INTRODUCTION

This publication explores the materials, illustrations, and special features of five remarkable silk Prayer Books. Modeled on medieval manuscripts yet woven in the late nineteenth century on Jacquard looms, the woven Prayer Book is a triumph of the ingenuity and industry of Lyon – the historic silk weaving capital of France. It is the only illustrated woven book ever created, and it is estimated that just fifty to sixty examples were made, yet no census exists. The five examples here are explored with a copy-specific view (or more accurately weaving-specific view) to note the physical characteristics of each. All previous studies have treated the woven Prayer Book as a uniform series or edition. Instead, my approach takes a closer look at how these books were made and reveals subtle but surprising differences between each surviving book. As a group, the five examples here reveal intriguing new discoveries about their materials and manufacture. They also comprise the largest collection ever assembled and offered for sale at one time.

Many medieval manuscripts on parchment, and especially illuminated Prayer Books, were assembled from discrete components made at different times and places. These woven Prayer Books are also the result of successive stages, just like the manuscripts that inspire its pages – from fabrication, customization, and binding to gifting and ownership. One example was specially made for a well-to-do Parisian couple, with their paired coats of arms and wedding date woven into a preliminary page (no. 4). Three are clad in unusually ornate gold-tooled bindings that set them apart from others (nos. 2,
3, and 5). Two are bound in what might be called the standard presentation by Kauffmann-Petit in Paris – far from mundane in flawless full morocco (goat or sheepskin) covers (nos. 1 and 4).

Exhibited at the 1889 Paris *Exposition Universelle* – the World’s Fair best known for the official unveiling of the Eiffel Tower – the woven Prayer Book was hailed as a marvel. A few years later it appeared at the 1893 World’s Columbian Exposition in Chicago, site of the world’s first Ferris wheel, where it again received acclaim and first caught the eye of American collectors.
Libre des Prières
Gisè
d’après les Illuminations des Manuscrits du
joy au XVe Siècle.
 Lyon
MDCCCLXXXVI.
The Livre de Prières tissé

There is no question that the woven book is exactly that – a book, bound in leather covers, with a title (Livre de Prières tissé), date, and dedication. Both familiar and unusual, it is neither written by hand nor printed by press but woven from silk. It falls somewhere between rare book and textile, most often encountered in museums, research libraries, or the private collections of bibliophiles.

Like a Book of Hours – and sometimes classified as one – the woven Prayer Book is filled with prayers for morning and night followed by others for special Masses, including marriage and communion. Every page is richly decorated with ornate borders in the style of illuminated manuscripts from the fourteenth to sixteenth centuries, including the title page with four angels playing musical instruments and with the coat of arms of the city of Lyon. This page in particular emulates the decorated borders in the celebrated Grandes Heures of the Duke of Berry from the early fifteenth century (Paris, Bibliothèque nationale de France, MS lat. 919, f. 8). Other pages borrow elements of borders by the sixteenth-century French illuminator Jean Bourdichon, an artist made popular by a facsimile of his Grandes Heures of Anne of Brittany published by Engelmann and Graf between 1846 and 1849 (also at the Bibliothèque nationale de France, MS lat. 9474).

Inspired by Italian Renaissance paintings attributed to artists famous in the nineteenth-century, the book’s full-page and smaller illustrations enliven the text and borders. The full-page Nativity blends bits and pieces of paintings by Fra Angelico,
Left: Nativity, p. 6 (no. 1; BOH 164)
Right: Nativity by Fra Angelico, panel from the Armadio degli Argenti, Museo di San Marco, Florence, detail
Christ with the Virgin and St. John the Baptist, p. 33 (no. 1; BOH 164)

Disputation of the Holy Sacrament by Raphael, *Stanza della Segnatura*, Vatican City, detail
drawing mainly on the *Armadio degli Argenti* (Silver Chest) at the Museo di San Marco in Florence, yet mindfully transposing the Christ Child from barn floor to crib.¹ The Crucifixion is modeled after Fra Bartolomeo, as identified in the nineteenth century by early critics, who likely received this information from the fabricator J.A. Henry. A half-page illustration of Christ with the Virgin and St. John the Baptist is directly modeled on Raphael’s fresco of the Disputation of the Holy Sacrament in the *Stanza della Segnatura* at the Vatican City, a landmark in art history and in the institutional history of the Roman Catholic church.²

The silk pages were created on a Jacquard loom, a partly-automated weaving machine, involving over one hundred thousand punch cards and millions of small manipulations by a skilled weaver.³ Achieving the pixel-like precision of its text and illustrations required the pages to be woven with four hundred threads per inch, with each black silk thread of the weft (running vertically to the page) passing under the grayish-silver threads of the warp (horizontal to the page). The information for the designs and text was encoded in patterns on punch cards joined together in long chains and fed into the machine perched atop the loom. These punch cards determined the precise movements of mechanized hooks that lifted individual threads, under which the worker shuttled back and forth the black thread. In this way the Jacquard loom assumed the most detail-oriented portion of the process, previously done by a second worker. It reportedly took two years and close to fifty trials before a full book was successfully completed. If laid out end to end the mass of punch cards that controlled the loom’s movements would cover over seven hundred and fifty square feet (equal to seventy square meters) – easily the entire floorspace of a one-bedroom apartment.

Colophon on final page, p. 44 (no. 1; BOH 164)
# Table des Matières

- Prières du Matin et du Soir 1
- Prières durant la 1ère Messe 11
- Messe de Mariage 228
- Pour la 1ère Communion 228
- 1ère du Très Saint Sacrement 229
- 1ère du Saint Esprit 229
- 1ère de la Sainte Vierge Marie 229
- Prières diverses 229

**Expleto libro, referatur gratia Christo.**

---

**Aet ouvrage a été heureusement achevé à Lyon le viii Sept. d’an de IH. MDCCLXXI. sur les dessins du R.P. J. Heurnier S.M. par J.A. Heurny, fabricant. A Roux libraire éditeur Lyon.**
At least partly because it falls between the cracks of traditional cataloguing, no complete census of surviving copies of the *Livre de prières tissé* exists, nor is it clear how many were fabricated. The best known and published example is at the Walters Art Museum in Baltimore, customized for Jennie Walters Delano (Henry Walters’ sister), and which was recently the subject of the exhibition “Woven Words: Decoding the Silk Book” (February 6 to April 28, 2019). Partial lists of examples found in North American collections have been compiled by Lilian Randall and Michael Laird.

**Lyon: Silk Weaving Capital of France**

A long history of industry and innovation undergirds the woven book. As fabricated on Jacquard looms (invented in Lyon) and made from Cévennes silk (produced in south-central France), virtually every part of the book’s manufacture embodies the city’s history. The partnership behind its production is recorded in an escutcheon supported by the two rampant lions of Lyon: the designer Father Jean Hervier, the fabricator Joseph-Alphonse Henry, and the editor Antoine Roux. Although relatively unknown compared to Henry and Roux, Jean Hervier is similarly tied to the religious history of Lyon as a priest affiliated to the Society of Mary (its members known as the Marists) which was founded and headquartered in Lyon in the early nineteenth century.

The history of silk weaving in France itself dates to the late Middle Ages. After a first flourishing in Tours, Lyon emerged in the seventeenth century as the largest producer of silk textiles,
Printed silk handkerchief with portrait of J.-M. Jacquard; unknown maker, early 19th century, Cooper Hewitt Smithsonian Design Museum, New York (inv. no. 1962-109-1), Museum purchase through gift of Alice Lusk Webster.
and it remains so today. Through booms and busts a large swath of the city’s population has been tied to silk weaving. An overview of the industry’s ubiquity in Lyon can be seen in the paraphernalia charmingly depicted in an early nineteenth-century silk handkerchief at the Cooper Hewitt Smithsonian Design Museum in New York, printed by engraved roller. A wreath of mulberry leaves crawling with silkworms orbits around a bust-length portrait of Joseph-Marie Jacquard (1752–1834), the man credited with the invention of the loom device that revolutionized silk weaving in the early nineteenth century. Chains of punch cards hanging from Jacquard looms appear in the borders along with an array of silk weavers’ tools (shuttles, bobbins, scissors, combs), with caricature-like renderings of a bourgeois man interrogating a woman pointing at her overworked wrist.

Silk weaving houses were family enterprises handed down across generations, as was the case with Joseph-Alphonse Henry (1836–1913). Assuming the mantle of his family’s growing business in 1861, Henry specialized in luxurious liturgical vestments and special productions for the highest echelons of the church, including Pope Pius XII. Presaging the woven Prayer Book, Henry created a grand woven pictorial dais for the basilica of Notre-Dame de La Salette between 1874 and 1876 that portrayed dozens of saints with complex iconography. Around this same time in 1884 the Basilica of Notre-Dame de Fourvière was completed, a towering neo-Gothic landmark overlooking the city of Lyon.

The 1886 Lyon jubilee was the primary impetus for the woven Prayer Book. A dedication by Cardinal Louis-Marie Caverot, archbishop of Lyon, is woven into the unnumbered opening
pages to mark this occasion. Surprisingly, a predecessor to the woven Prayer book exists in an unillustrated woven book also made by J. A. Henry in 1878, which was reissued in 1886 with decorated borders.8 Containing the poem “Les Laboureurs” from the book Jocelyn by Alphonse de Lamartine, this earlier woven book, of which only a few examples are known, was in many ways a testbed that enabled the studio to embark on the second and much more widely hailed marvel, the Livre de prières tissé.

Flesh, Blood, and Mechanical Reproduction

Like parchment or vellum, silk is similarly imbued by the living things from which it is obtained. Indeed, the woven Prayer Book emulates the look and feel of fine, glassy vellum. This detail caught the eye of an early critic who noted how each page appeared as “une feuille glacée de beau vélin” (a glossy [or frozen] leaf of fine vellum).9 Like the animals slaughtered to make parchment, silkworms do not survive the hot water used to boil their cocoons, which begins the process of loosening and unraveling the silk threads. The larval stage of the Bombyx mori moth, silkworms are gorged on leaves picked from the mulberry tree to induce their cocoon building stage. Mulberry trees are planted abundantly in the Cévennes region, where they have also been called the “golden tree” to acknowledge its economic impact.10

The dyed color and subtle luster of the silk threads show that a choice was made to create a vellum-like appearance. Slight variations in color can be seen in the five examples collected
here. Three are starkly silver-gray, as are most examples, while others have a slightly red or yellow hue, including one with a woven date of 1902 (no. 4) and another with an Art Deco-style binding that probably dates its fabrication to after 1900 (no. 5). These two examples are evidence that the woven Prayer Book continued to be made after the turn of the century, perhaps fabricated from silk threads dyed in different batches. These dye batches might have been produced for the initial 1880s production run. Keeping in mind discoloration can occur with age and exposure to light, and that each example was handled in varying circumstances, it is difficult to draw firm conclusions from these slight differences in hue.

The ornate foliate and geometric borders of medieval manuscripts are in a sense part and parcel to the parchment medium. In fact, some facsimile editions printed on paper mimic original manuscripts by simulating the hair sides of parchment folios (with small hair follicles often easy to see) using printed brown flecks. Commenting on the foliate borders in the woven Prayer Book and their well-known medieval models, Lilian Randall noted that “the motifs of earlier periods, caught in the firm grip of Victorian taste, have lost most of their flesh and blood in the process of mechanical reproduction.” Yet the woven book is not alone in emulating the “flesh and blood” of the parchment page, even if it does so in an unorthodox way.

Printed editions with color lithographs that reproduced the most illustrious manuscripts in the grand libraries of France were widely popular in the mid to late nineteenth century. One such example with printed flecks simulating the hair sides of parchment was used by Jean Hervier for his border designs in the woven Prayer Book, a composite edition titled *L’imitation de*
Left: Kneeling woman in prayer, p. 1 (no. 1; BOH 164)
Top right: L’imitation de Jésus-Christ, plate XXXI, detail
Lower right: Donor portrait of Elizabeth van Munte in the Hours of Daniel Rym, Walters Museum of Art, Baltimore, W.166, f. 62, detail
The Woven Prayer Book. Cocoon to Codex

Jésus-Christ published by Gruel and Engelmann in 1883. The portraits of kneeling donors that appear in the woven Prayer Book are modeled on plates in this edition, as noted by Lilian Randall, which in turn reproduce a manuscript illuminated in Ghent around 1425 for Elizabeth van Munte and Daniel Rym that is now at the Walters Museum of Art in Baltimore, having passed through Gruel’s collection.

The kneeling woman (after Elizabeth van Munte) on the first numbered page of the woven Prayer Book cleverly retains her original context kneeling before an image of the crowned Virgin Mary, now swapped out for the Virgin and Child in the manger seen on the opposite page in the Nativity. Other facsimile editions also inspired Hervier’s designs for the woven Prayer Book, including the ribbon-line monogram in the borders of the colophon page modeled after borders in the Hours of Duke Adolph of Cleves, as reproduced in a facsimile Heures du Moyen Age (1862), also published by Gruel and Engelmann. This Book of Hours is now also at the Walters Art Museum and also passed through Gruel’s collection.

Hervier’s original drawings for the woven Prayer Book, donated to the Musée des Tissus in Lyon in 2015, reveal an unusual design process. Rather than drafting each page to completion, Hervier instead completed sections of each border which could be rotated or flipped in the process of encoding the design onto punch cards by way of mise en carte – a process not too different from the computer-aided design practiced today. Hervier later served as procurator of the Service des Missions d’Océanie, a vast network of Marist missionaries in the Pacific. His only other artistic activity known to date is a series of scientific drawings of sea shells that arrived at his office from far-flung Oceanic islands.
Livres
de Prières

D'après les miniatures
des Manuscrits
du IV° au XIIe siècle

Lyon
MDCCLXXXVI.
Engravings after these drawings are reproduced in the *Journal de Conchyliologie* between 1896 and 1899 and are credited with the classification of several new species. Although they postdate the woven Prayer Book by a decade, Hervier’s scientific drawings show that he paid close attention to his sources, be they facsimiles of medieval manuscripts or the well-traveled shells of mollusks.
Woven Dedications and the Gift Book

Every set of woven pages allowed for customization inside an escutcheon on the first unnumbered page, but only some examples were customized for their owners or recipients. In keeping with the taste of the times, these woven customizations could be used to fashion the woven Prayer Books into a luxurious gift book. One example here in fact retains its original presentation box by E. & A. Lesort (no. 3).

More importantly, the reserved space inside the escutcheon shows the depth of nineteenth-century attitudes toward the gift book and its association to the illuminated manuscript. Many facsimile editions of medieval manuscripts, some simulating even the material of parchment, were intended to teach prayer practices and to promote a French cultural identity through a new appreciation of manuscript illumination. Parisian publishers dominated the production of this type of gift book in neo-Gothic style, most with texts for Mass and marriage. Many were widely published, even churned out, in partly-illustrated editions without color, but others were written and illuminated by hand. These facsimiles and related neo-Gothic manuscripts went a long way toward forming a basis for the re-appreciation of medieval manuscript illumination in modern times. The Livre de prières tissé plays a part in that story of recovery.\(^{18}\) As keyed in to a long history of manuscripts with coats of arms or family mottoes in the opening pages, or even the blank spaces reserved for them, the woven Prayer Book has been called a “final exaltation of the medieval Book of Hours.”\(^{19}\)

It is not entirely clear if the customized pair of pages was woven on demand to supplement pre-fabricated books or if the entire
set of pages was woven at one time for each client. The slight variations in the color of the silk suggest that the latter is more likely of these two. The woven Prayer Books customized with a monogram or coat of arms (or a motto or date) must have been ordered from the fabricator in Lyon, either directly from J. A. Henry or perhaps through the editor A. Roux. Significant lead time was surely required to fulfill these requests. In any case, these custom-made pages continued to be made as late as 1902, judging from the date woven into the banderole of the Maingard Prayer book (no. 4). Coincidentally, there is a Book of Hours made in Ghent or Bruges in 1499 that later belonged to Jean De Noval and Jeanne Meyngart (or Maingard) of Saint-Malo, Brittany – the fifteenth-century ancestors of the Maingard family – that is among the few medieval prayer books with secure early provenance.

Some new discoveries can be made by comparing four of the examples here. A small initial “H” is woven inside the banderole on most but not all of these pages. It is lacking here in two examples (nos. 1 and 3). This same “H” appears in the final page with the table of contents. It perhaps belongs to Hervier, the designer, but it is more likely that of Henry, the fabricator, who used woven labels sewn into their garments (none of these labels, however, have yet been matched to the letter “H” in the banderoles of the woven Prayer Book). Two types of customization can be identified. The first are those with monograms of intertwined letters, like the “MM” for an unidentified owner here (no. 2). Other examples are known with similar intertwined letters, but they have not been comprehensively studied. Customization with coats of arms is comparatively rare, as in the already-noted escutcheon with paired coats of arms which belong to the count and countess Maingard of Saint-Malo, Brittany (no. 4), who were
Top left: Blank escutcheon and banderole (no. 1; BOH 164);
Top right: Blank escutcheon and banderole with initial H (no. 5; BOH 167);
Lower left: Escutcheon with woven monogram MM (no. 2; BOH 165);
Lower right: Escutcheon with woven coats of arms and motto dated 1902 (no. 4; BOH 154)
married in Paris in 1902. Other examples with coats of arms are known, including one with the arms of Fernand de Girardon Praton dated 1887.  

“An Artistic Marvel”: Paris 1889 and Chicago 1893

The woven Prayer Book was widely praised when it was exhibited at the 1889 Paris Exposition Universelle. Displayed in a vitrine nearby other Lyonnaise silk weavers, the woven Prayer Book’s relatively side-show status – located away from the displays of books and bindings – very likely added to its novelty and desirability among Parisian bibliophiles. The woven book dazzled Paul Marais, adjunct curator at the Bibliothèque Mazarine, who was among the first to praise its novelty and ingenuity. Calling it “an artistic marvel,” a similar tone was struck by Alfred Lailler, who reported his impressions to the Société Industrielle de Rouen in 1890. Yet another commentator, the publisher and collector Édouard Rouveyre, hailed the woven Prayer Book as “a veritable marvel that was in the display...among the most precious silks.”

Turning away from the tumult of the Paris Commune in the 1870s, still fresh in the world’s memory, the 1889 exposition in Paris set out a bright new vision of the past and future. The taste for neo-Gothic art and design gripped much of France and Europe in the 1880s. Originals and copies of medieval artworks were on display, including reliquaries, ivories, and plaster casts of monumental sculpture that framed entire doorways. Although Eiffel’s tower is its most enduring monument, the vast displays at the Paris exposition established a grand new scale that set the tone for world-class art museums Paris as we know them today.
The “artistic marvel” crossed the Atlantic for its American debut four years later at the 1893 World’s Columbian Exposition in Chicago. Like Paris, Chicago aimed to show the world a vision of the future following the devastating fire that destroyed huge parts of the city in 1871. So much was rebuilt, and this time in brick and stone rather than wood, that Chicago was called a “Second City,” as it is still known – today skewed in popular understanding to frame Chicago as New York City’s subordinate. The woven Prayer Book was exhibited in the Woman’s Building, where the reviewer H. L. Gargan noted that Henry’s “prayer book, woven in silk, is a work of art and deserves a most special mention.”26 Devoted to fine arts and craft, at that time associated with “woman’s work” and femininity, the Woman’s Building in Chicago was organized by the art collector and socialite Bertha Palmer who personally hired women to design and decorate the building. These artists included Mary Cassatt, who painted

![Photo of the Woman’s Building in Chicago, 1893](image)

![Illustration of medieval art displays at the 1889 Paris Exposition Universelle, in L’Exposition de Paris de 1889, no. 75, p. 9, detail](image)
a massive murals for the building’s interior (since destroyed). Although the exhibition of the woven book in Paris garnered more attention, the fact that it was displayed in Chicago says a great deal about the wider ambitions of its fabricators, who saw their woven silk book as an embodiment of Lyon’s past and future.

**Bindings of Morocco and Silk**

An uncut sheet containing all the woven Prayer Book’s pages initially sold for 260 francs, a sizeable sum. A full-morocco (goat or sheepskin) binding easily added another 100 francs to the total cost. A personalized binding also made a luxurious gift, with at least one example among the five collected here made as a wedding present (no. 4). The exact role of the bookbinder in producing the finished product varies by each example, resulting in small differences in sizes and materials. The silk sheets woven in Lyon, with or without monograms or mottos woven into the unnumbered opening pages, were first cut down the middle along a line marked with red silk thread embedded into the weave. After this first length-wise cut, the sheets were cut again into bifolios, with each of these folded and glued over heavy paper or card supports. The edges of the silk were brought together to create tabs on one side (also called onglets), which were sewn together to form a book block with five bands.

Two of the examples here (nos. 1 and 4) are bound in maroon levant (or extra fine) morocco in the so-called Jansenist style and gilt stamped “Kauffmann-Petit” and “Maillard.” Kauffmann was the primary Paris agent for J.A. Henry, with Antoine Roux acting
Left: Jansenist-style morocco binding by Kauffman-Horclois (no. 5; BOH 167)
Right: Gilt fold-ins and maroon silk doublures inside front cover, with a woven silk bookmark showing
Joan of Arc holding a flag on the ramparts at Orléans (no. 5; BOH 167)
as editor in Lyon. In Paris, Maillard was considered a leading specialist of the art of gilding. Bookbinders unaffiliated with Kauffmann no doubt saw the woven Prayer Books arrive in their workshops through special commissions from well-to-do clients, including two of the five examples here by Marcelin Lortic (no. 2) and E. & A. Lesort (no. 3). These binders approached the job in slightly different ways. Deluxe bindings made by other notable workshops are also known, like the deluxe example bound by Charles Munier ordered by Henry Walters.30

Named for a Catholic theological movement originating in the seventeenth century under Cornelius Jansen (1585–1638), the Jansenist-style binding is almost entirely unadorned on the exterior. In the nineteenth century such bindings were seen to complement a book’s Catholic contents, but Jansenist bindings were not used exclusively for religious books. Wrapped on the exterior with unadorned morocco except for simple tooling on the spine, the interiors of the covers are lined with vibrant silk (called doublures) surrounded with gold-tooled fold-ins, where the leather was wrapped around the edges of the boards. The hidden luxury of these bindings was surely a delight to the owner, but the plain exterior is also luxurious in its quality and craftsmanship, since it required a sizeable and flawless piece of morocco leather for the finished product. The full-morocco binding was itself increasingly rare and expensive in the late nineteenth century. Less expensive half-morocco covers eventually replaced it, which used smaller swatches of leather on the corners and spine.

An unusual example is clad in blue morocco with elaborate gilding by Marcelin Lortic (1852–1928) (no. 2). Compared to the plain exterior of the Jansenist bindings, this is a far more
opulent product with gilt panels of elegant flowers on looping tendrils. A comparable but less ornate binding by Marcelin Lortic was illustrated in 1888 by Léopold Derôme as a prime example of luxurious gilt morocco made in Paris. Among the most sought-after Parisian bookbinders of his day and boasting an international clientele, Lortic built on the success of his father, Pierre-Marcelin Lortic (d. 1892), who had been called the king of the Jansenist binding for the quality and luster of his fine morocco leathers. Upon his death in 1892 the elder Lortic was highly praised in one American journal: “since the artisans of the Renaissance who worked for Grolier not one had the gift of fitting morocco covers to books as if they were inseparable until Lortic.”
Some disdained the huge success of the deluxe Lortic style. Characterizing various types of book collectors active in the 1880s, the author and bibliophile Octave Uzanne imagined one type of traditionalist who preferred antique books and rarely ordered new bindings for themselves. As Uzanne explains, this imagined traditionalist was irritated, if not provoked, by modern luxury bindings: “Ne lui parlez point de Lortic, il l’égratignerait jusqu’au maroquin” (Don’t speak to him of Lortic, he would tear into its [or the speaker’s] leather).34

A Digital Forerunner

The woven book is an uncanny ancestor to the pixelated digital images of electronic displays. It also stands apart from the manuscripts and printed facsimiles that inspired its pages in that there is no physical model (called an exemplar) to be copied by a scribe. Rather, the information containing the “stuff” of its design was encoded in punched cards.

Historians often point to the woven Prayer Book as one of the most complex and unusual objects produced on a Jacquard loom, which was a key landmark in the centuries-long development of the programmable computer and the digital image. Earlier in the nineteenth century the punch cards used by Jacquard looms were described by the “Enchantress of Numbers” Ada Byron King (1815–1853), the Countess of Lovelace, in her explanation of machine-readable algorithms that could (theoretically) be processed by Charles Babbage’s Analytical Engine – a mechanical computer that was never actually built in the nineteenth century. More recently the anthropologist Nicholas Gessler has noted that the Jacquard loom separated the “work” from the
“weaving,” which was in some sense “the beginning of a long process of information losing its body.” As stored on punched cards, which could themselves be duplicated or archived, it is all the more remarkable that the woven Prayer Books continued to be made past 1900, decades after they first appeared.

The concept of the uncanny valley is sometimes evoked in popular culture to explain the unsettling or spooky feeling we experience when confronted with nearly true-to-life CGI (computer generated imagery) and animation. The term encapsulates the feeling of a thing that somehow betrays its artificiality. In this vein, the digitization of medieval manuscripts has provoked ongoing scholarly discussion in the Digital Humanities around the terms we use to describe representations of physical objects, like facsimile, surrogate, and avatar. The woven Prayer Book occupies a similar place of both familiarity and discomfort, rooted in the way it blends the look and feel of the illuminated manuscript with the tactility and luster of woven silk, all made possible by a complicated technology that is little understood by a general audience. With no ready-made category to describe the woven book, it has tended to fall through the cracks of traditional cataloging.

Designed in flourished neo-Gothic style, built up from a matrix of silk threads, sometimes customized, and luxuriously bound in leather, the woven Prayer Book is a nineteenth-century dream come to life. In closing his comments written in 1889, Paul Marais in fact did call the woven book a dream come true (“un rêve est devenu une réalité”) but also joked that in the twentieth century it might become possible to buy the works of Cicero woven in silk “by the meter” at French department stores – apparently casting doubt on the long-term prospects of this curious book.
form. If we recast this dream from “by the meter” to “by the gigabyte” then Marais’ dream might be seen as a veiled reading of our present future of eBooks and iPads. Woven on Jacquard looms and thus reproduceable with the right combination of machine, punch cards, and skilled labor, the woven Prayer Book remains one of the most enigmatic objects in the long history of the digital book.


3 The number of punch cards cited in the creation of the woven Prayer Book varies from around 100,000 or 106,000 to 500,000; see Randall 1981, pp. 651-668, esp. n. 28.

4 Randall 1981, p. 652, states that “fifty to sixty” copies of the woven Prayer Book were made and this figure has been cited by others. According to Rouveyre 1899, vol. 3, p. 98, the edition was limited to five hundred, but it is doubtful that so many were made.
6 The silk is identified as coming from Cévennes by, among others, Rouveyre 1899, v. 3, p. 98.
7 This dais, various small-scale samples, and their mise en carte designs are now at the Musée des Tissus, Lyon, inv. nos. 49287, 49271, and 2015.5.
8 An example of “Les Laboureurs” with title page dated 1878 is also in the collections of the Musée des Tissus in Lyon, inv. no. 2015.0.14.
12 Randall was not able to identity Hervier in her 1981 essay.
14 Walters Museum of Art, Baltimore, W.439.
15 Durand 2015, “Manuscrit du Livre de prières tissé,” www.mtmad.fr, Musée des Tissus, Lyon, inv. no. 2015.5.57, gifted by Don Truchot, successor to J. A. Henry. Archives from both firms are also preserved by Prelle, an active manufacturer in Lyon with showrooms in Paris and New York.
16 The mise en carte for the woven Prayer Books was executed by Christophe Gerbaud. Two pages are conserved at the Musée des Tissus in Lyon (inv. 49277.1 and 49277.2). Gerbaud also worked with designs drawn by the artist Gaspard Poncet for the Angel Chasuble made by J. A. Henry in 1889.
20 Alfred Lailler gives thanks to A. Roux for the first and second page of an example of the woven Prayer Book donated to a museum in Rouen (not identified), suggesting that Roux managed the process of customization for the opening pages of the woven Prayer Books; see Lailler 1890, p. 270.
23 Marais 1889, pp. 163-166.
24 Lailler 1890: “Une merveille artistique.”
25 Rouveyre 1889, vol. 3, p. 93: “une véritable merveille qui se trouvait dans la vitrine...au milieu des étoffes les plus précieuses.”
28 Randall 1981, p. 660-661, fig. 12; a pair of unbound pages with red silk thread is in the collections of the Walters Museum of Art (acc. no. 83.736), Gift of J. René Truchot 1975.
29 These steps are described by Marais 1889 and others; see also Durand 2015.
30 Baltimore, Walters Museum, 92.123; see Randall 1981, p. 661 and fig. 2.
31 Léopold Derôme, La Reliure de Luxe: Le Livre et l’Amateur (Paris, 1888), pl. III and IV.
33 The American Bookmaker 14 (June 1892), p. 205
37 Marais 1889, pp. 165-166; see also Randall 1981, p. 662.

Boccaccio, De Claris Mulieribus, Pamphilia collecting silkworm cocoons and weaving silk fabric, f. 54v. France, c. 1440, British Library, Royal 16 G V, detail
The Woven Prayer Book. Cocoon to Codex
The Woven Prayer Book. Cocoon to Codex

Bonnefond, Carquillat, Didier, Petit et Cie, France, Lyon 1844,
The Metropolitan Museum of Art, New York, Rogers Fund, 1938, 38.170
Catalogue
1.

*Livre de Prières Tissé d’après les enluminures des manuscrits du XIV au XVIe siècle* [Book of Prayers woven after illuminations in manuscripts of the fourteenth and fifteenth century]

In Latin and French, illustrated book woven in silk

*Lyon, R.P.J. Hervier, designer; J. A. Henry, fabricator, for A. Roux, 1886-1887*

[iv] + {6} (unnumbered) + 44 + [iv] = 58 silk pages, small in 4°, 43 pages numbered in Roman numerals, plus 6 preliminary pages, plus 4 pages front and back of mounted silk, text block 170 x 135 mm., text in one or two columns, with one half-page and three full-page illustrations, in addition to various styles of decorative borders and initials throughout on every page, woven entirely in silver-gray and black silk, with a greyish-silver texture to the cast, fore edges gilt head and tail. Bound in Jansenist-style maroon levant morocco by Kauffmann-Petit and Maillard, with turquoise silk doublures, at front with painted initials “M” and “G” with blue flowers on stems set on square gold, with gilt edges and fold-ins, gilt stamped “KAUFFMANN—PETIT” inside front and “MAILLARD” at back, with five raised bands, spine stamped “LIVRE DE PRIÈRES;” in extremely good condition, with small stains on p. i and pp. 26-27. Dimensions 175 x 145 mm.

Bound in maroon levant morocco in the Jansenist style and signed “Kauffmann—Petit” and “Maillard,” this example of the woven Prayer Book typifies what might be called the standard presentation, here in extremely good condition. Initials are hand painted on the inside of the front cover, which also features turquoise silk doublures.

**Provenance:** Woven in Lyon by the firm of J. A. Henry, perhaps passing through the Parisian agent J. Kauffmann; initials “M” and “G” painted on front silk doublure.

**Text and Illustrations:** See Appendix.

BOH 164
2.

*Livre de Prières Tissé d’après les enluminures des manuscrits du XIV au XVIᵉ siècle* [Book of Prayers woven after illuminations in manuscripts of the fourteenth and fifteenth century]

In Latin and French, illustrated book woven in silk
Lyon, R.P.J. Hervier, designer; J. A. Henry, fabricator, for A. Roux, 1886-1887

[viii] (paper) + {6} (unnumbered) + 44 + [viii] (paper) = 50 silk pages, small in 4°, 43 pages numbered in Roman numerals, plus 6 preliminary pages, plus paper fly leaves front and back, two of them marbled paper mounted with silk, text block 171 x 134 mm., text in one or two columns, the second unnumbered page with woven monogram “MM,” one half-page and three full-page illustrations, in addition to various styles of decorative borders and initials throughout on every page, woven entirely in silver-gray and black silk, with a greyish-silver texture to the cast, fore edges gilt. Bound in dark blue panel gilt morocco by Marcelin Lortic of Paris, the covers with elaborate foliates, strapwork, fleurons, and friezes, with crimson morocco doublures, edges gilt with a knotted cord design, fold-ins gilt and stamped “M. Lortic” inside front, with five raised bands, spine gilt stamped “Prières” in Gothic blackletter, in very good condition, with some abrasions to the left edge of the spine and some edges of lower board, two stains pp. 23-25, and with fine creasing to the edges of some pages, likely original to the time of binding. Dimensions 178 x 145 mm.

This uncommon example of the woven Prayer Book is bound in beautiful and luxurious dark blue gilt morocco with maroon morocco doublures signed by the well-known Parisian bookbinder Marcelin Lortic (1852–1928). It is further distinguished from others by its rare woven monogram inside the escutcheon on the first unnumbered pages with the interlaced initials “MM,” customized for an unidentified owner. Compared to the plain exterior of the Jansenist-style covers on most other examples, the client in this case desired a far more opulent product with gilt panels and elegant flowers on looping tendrils. A comparable but less ornate binding by Marcelin Lortic was illustrated in 1888 by Léopold Derôme as a prime example of luxurious gilt morocco made in Paris. Among the most sought-after Parisian bookbinders of his day and boasting an international clientele, Lortic built on the success of his father, Pierre-Marcelin Lortic (d. 1892), who had been called the king of the Jansenist binding for the quality and luster of his fine morocco leathers.

**Provenance:** Woven in Lyon by the firm of J.A. Henry; interlaced initials “MM” woven into escutcheon; pencil inscription “G-1979” on back paper fly leaf.

**Text and Illustrations:** See Appendix.

BOH 165
The status of the woven Prayer Book as a luxurious gift object is very clear in this example, which retains its original presentation box. The front doublure is gilt stamped with initials and date May 1900, but there is no indication that the silk pages were woven at this relatively late date. The silver-grey hue of the silk more likely indicates that this example was woven in the late 1880s and was untouched until it was bound and customized later. This example lacks the letter “H” that appears in the banderole below the blank escutcheon in others. The white gilt morocco binding is signed by E. & A. Lesort, located at 3 rue de Grenelle, near Saint-Germain-de-Prés in Paris. This firm advertised their specialization in books for wedding gifts, and Lesort is listed among the Parisian binders that Octave Uzanne cites by name as makers of Jansenist-style bindings (Uzanne 1887, p. 231).

Provenance: Woven in Lyon by the firm of J.A. Henry; monogram “HM” gilt stamped on covers; pencil inscription on unnumbered silk page: Marie José Seiler, Chexbres [Switzerland].

Text and Illustrations: See Appendix.

BOH 166
Livre de Prières Tissé d’après les enluminures des manuscrits du XIV au XVIe siècle [Book of Prayers woven after illuminations in manuscripts of the fourteenth and fifteenth century]
In Latin and French, illustrated book woven in silk
Lyon, R.P.J. Hervier, designer; J. A. Henry, fabricator, for A. Roux, 1886-1887, probably 1902

{iv} + {6} (unnumbered) + 44 + [iv] = 58 silk pages, small in 4°, 43 numbered pages, plus 6 preliminary pages, plus 4 pages front and back of mounted silk, text block 168 x 138 mm., the second unnumbered page woven with the conjugal coats of arms of the Maingard and de Langle families and with motto “Ut Rupes nostra” and date “10 juin 1902,” text in one or two columns, one half-page and three full-page illustrations, in addition to various styles of decorative borders and initials throughout on every page, woven entirely in silver-gray and black silk, with a greyish-silver texture to the cast, fore edges gilt head and tail. Bound in Jansenist-style maroon levant morocco by Kauffmann-Petit and Maillard, with maroon silk doublures, gilt edges and fold-ins, gilt stamped “KAUFFMANN-PETIT” at front and “MAILLARD” at back, with five raised bands, spine stamped “LIVRE DE PRIÈRES,” in excellent condition, with original maroon cloth slipcase lined with maroon silk. Dimensions 175 x 138 mm.

Concealed within what might be called the standard Jansenist-style morocco binding by Kauffmann-Petit, this example of the woven Prayer Book includes a specially-woven escutcheon with a pair of coats of arms representing the union of the Maingard and de Langle families of Saint-Malo, Brittany, with the Maingard motto “Ut Rupes nostra” and date “10 Juin 1902” (p. i verso), with Maingard arms at left (d’or, à une fasce de gueules, au chêne arraché de sinople, brochant sur le tout et fruité de deux glands d’or pendants sur la fasce) and de Langle at right (d’azur, au sautoir d’or, cantonné de quatre billettes du meme). This woven Prayer Book was surely presented as a marriage gift, perhaps from a relative who was familiar with the heraldry and motto of the Maingard family, one of the oldest noble houses of Brittany. The couple’s civil marriage date is recorded as June 9 (Archives of the City Paris), with the couple’s Catholic ceremony recorded in the Prayer Book occurring the following day, June 10. The yellowish hue of the silk pages further shows that this example was woven late in the overall production run.

An address for the townhouse of the count and countess Maingard on the fashionable avenue Friedland is recorded around the turn of the century, sited between the Arc de Triomphe and the residence of Salomon de Rothschild. The couple were also noted as members of the Cercle de l’Union Artistique (Le Livre d’Or des salons, 1905, p. 501).
Provenance: Woven in Lyon by the firm of J. A. Henry; The Count and Countess Maingard, Alain Maingard (1874–1955) and Marie Maingard (née de Langle, 1874–1959), woven escutcheon with coats of arms, Maingard motto, and wedding date, 10 June 1902.

Text and Illustrations: See Appendix.

BOH 154
5.

Livre de Prières Tissé d’après les enluminures des manuscrits du XIV au XVIe siècle [Book of Prayers woven after illuminations in manuscripts of the fourteenth and fifteenth century]
In Latin and French, illustrated book woven in silk
Lyon, R.P.J. Hervier, designer; J. A. Henry, fabricator, for A. Roux, 1886-1887, probably after 1900

{iv} + 6 (unnamed) + 60 + {iv} = 58 silk pages, small in 4°, 43 numbered pages, plus 6 preliminary pages, plus 4 pages front and back of mounted silk, text block 168 x 131 mm., text in one or two columns, one half-page and three full-page illustrations, in addition to various styles of decorative borders and initials throughout on every page, woven entirely in silver-gray and black silk, with a greish-silver texture to the cast, fore edges gilt head and tail. Bound in Jansenist-style burgundy-brown levant morocco by Kauffmann and Horclois, with maroon silk doublures, gilt edges and fold-ins with dark blue leather inlays, gilt stamped “J. KAUFFMANN - F. HORCLOIS” inside front, with five raised bands, spine stamped “Livre de Prières” in Gothic blackletter; in excellent condition, with original black cloth slipcase lined with maroon silk and a woven bookmark of Joan of Arc (120 x 30 mm). Dimensions 173 x 141 mm.

The reddish hue of the silk pages suggests this example was woven late in the overall production, perhaps around 1900. The escutcheon is blank but the banderole below does include the initial “H” (probably for Henry). The Art Deco-style binding shows the evolution of the Kauffmann bindery with the addition of Francis Horclois, however, the date that Horclois joined the firm is not clear, and not much is known about Francis Horclois other than the fact that he took charge of the firm in 1929 (see Duncan and de Bartha 1989, p. 96).

A woven silk bookmark with Joan of Arc is tucked inside the front cover, possibly added at the time it was bound or by a later owner. The bookmark is undated but depicts Joan of Arc lifting the siege at Orléans, commemorated in 1869 at the 440th anniversary of this siege and cited as one of the arguments for Joan of Arc’s canonization. Images of Joan of Arc exploded across France and North America in the late nineteenth century, following the recovery of her memory in memory popular culture and literature, culminating with Joan of Arc’s beatification in 1909 and canonization in 1920.

Provenance: Woven in Lyon by the firm of J.A. Henry, probably after 1900.

Text and Illustrations: See Appendix.

BOH 167
Appendix: Text and Illustration in the Woven Book of Hours

Text:

p. {1}, Half-title page, “Livre de Prières”;

p. {2}, Escutcheon (see physical description where customized);

p. {3}, Title-page, “Livre de Prières Tissé d’après les enluminures des manuscrits du XIVe au XVIe siècle. Lyon mdccclxxxvi.”;

p. {4}, official sanction of the content of the volume, incipit, “Varias precum formulas,” with the date September 8, 1886 and the name of Cardinal Louis-Marie Claverot, archbishop of Lyon and Vienne, with his arms and motto, along with the archiepiscopal arms of Lyon and the motto “Prima sedes Galliarum,” a reference to the importance of the city as a seat of Christian faith from the late second century on;

p. {5}, “Les Prières du Matin et du Soir”;

pp. 1–4, “Prières du Matin”;

pp. 5–10, “Prières du Soir”;

pp. 11–24, “Le saint Sacrifice de la Messe”;

pp. 25–32, “La Messe de Mariage”;

pp. 33–43, Prayers, for Communion (p. 33), to the Sacrament (p. 36), to the Holy Spirit (p. 38), to the Holy Virgin (p. 39), and diverse prayers (p. 42);

p. [44], “Table des Matières”.

Illustration:

Every page is surrounded by border decorations of a wide variety; listed below are the half- and full-page illustrations:

p. {6}, Nativity (full-page), after paintings by Fra Angelico (no single source is identified, but best compared to the Nativity on a panel from the Armadio degli Argenti (Silver Chest) at the Museo nazionale di San Marco, Florence);
p. 11, Elevation of the Host (historiated initial ‘M’);

p. 12, Crucifixion (full-page), perhaps derived from a painting attributed to Fra Bartolomeo;

p. 26, Virgin and Child surrounded by Angels (full-page);

p. 33, Christ with the Virgin and St. John the Baptist (half-page), after the fresco of the Disputation of the Holy Sacrament by Raphael in the Stanza della Segnatura, Vatican City.
The Woven Prayer Book: Cocoon to Codex
Prière du Matin

Au nom du Père et du Fils et du Saint Esprit.

Ainsi soit-il.

Dieu éternel et tout-puissant

Père, Fils et Saint Esprit, un seul

Dieu en trois personnes, je crois en vous,

parce que vous êtes la vérité même, j'espère en vous,

bien, parce que vous êtes infiniment bon et fidèle à vos promesses ; je vous adore et je vous aime de tout mon cœur,

parce que vous êtes souverainement aimable et j'aime mon prochain comme moi-même

pour l'amour de vous.

Je vous remercie, mon Seigneur Jesus, unique de Dieu.

Je vous offre mes pensées, mes paroles et mes actions, mon travail et toutes mes souffrances, en union avec vos actions et aux souffrances de Jézus-Christ et en pénitence de mes fautes. Présérez-moi, Seigneur, de tout péché, disposez de moi et de tout ce qui m'appartient et faites-moi la grâce d'accomplir avec amour votre sainte volonté.

Sauveur Jésus.
La Sainte Messe

Commencement de la Messe

Je vous offre pour vous remercier de tant de miséricordes touchantes dont votre bonté ne cesse de m’environner. Cette offrande égale des bienfaits, Seigneur; daignez accepter mes faibles actions de grâces unies à celles de mon Sauveur.

J’unis aussi ma voix à celle de son sang adorable pour vous demander pardon de mes péchés et de mon ingratitude. Accordez-moi enfin, Seigneur, par les prières de Celui qui s’est fait victime de propitiation pour nous, toutes les grâces que vous savez être nécessaires à mon salut et au salut de ceux que j’aime. Et par la vertu de ce sacrifice, daignez recevoir dans votre saint pare éternelle les âmes des
Ogresse de Mariage

L'autre : Rubic dix et vingt

Le Seigneur d'Israel nous unisse et que lui-meme soit adoré vous

lui qui a eu pitié de deux enfants uniques : faits Seigneur, qu'ils vous bénissent de plus en plus.

Ps. 38. Heureux celui qui craint le Seigneur et qui marche dans ses voies.

St. Gildas, au Père, et au Fils et au Saint Esprit Que le Dieu etc.

Par miséricorde, prenez-nous.

Dieu tout puissant et miséricordieux,

du qui le ciel par notre ministère, reçoire son accomplissement de votre bénédiction.

Par Jésus-Christ Notre Seigneur.

Lettre de l'Epître du bienheureux Apôtre Paul aux Ephésiens. v.

les sœurs, que les femmes soient soumises à leurs maris comme au Seigneur:
car le mari est le chef de la femme comme Jésus-Christ est le chef de l'Eglise, qui est son corps, dont il est aussi le Sauveur. Comme donc
Messe de Mariage

que sa vie soit pure et irreprochable, et qu'elle parvienne au repos des saints dans le royaume du ciel.

Bannis, Seigneur, qu'ils voient tousjours les enfants de leurs enfants jusqu'à la troisième et à la quatrième génération, et qu'ils arrivent à une heureuse vieillesse. Par le même Jésus-Christ Notre Seigneur.

Donnez-leur Seigneur, pour que, de l'homme qui craint le Seigneur, puissent-vous voir les enfants de vos enfants, et la paix dans Israël.

Postcommunion

Ainsi sera béni l'homme qui craint le Seigneur.
Avant la Communion.

Aime de Mon Dieu, que mon coeur et mon esprit soient entièrement présents dans la Eucharistie et qu’après m’être nourri de votre corps, de votre sang, de vous-même sur la terre et dans votre divinité que je vais revoir dans cet adorable sacrement.
The *Livre de prières tissé* was reviewed in print immediately after it was exhibited in 1889, with commentary and technical information appearing in French journals by Marais, Lailler, and Rouveyre, and in *Le Livre*. Its exhibition in Chicago in 1893 is noted by Gargan. The most comprehensive study of the woven Prayer Book remains that of Lilian Randall, published 1981. The most recent information furnished by Maximilien Durand follows the donation of Jean Hervier’s drawings and related pieces to the Musée des Tissus in Lyon in 2015. Literature is listed here in chronological order, followed by a general bibliography.

Marais 1889

Le Livre 1889
*Le Livre* 10, no. 112 (10 April 1889), pp. 207-208.

Lailler 1890

Rouveyre 1899

Gargan 1901

Vicaire 1904

Leroudier 1922
Harthan 1977

Randall 1981

Adrosko 1983

Berthod and Hardouin-Fugier 1992

Laird 2001

Musée d’Art et d’Industrie 2004

Charpigny and Blanc 2005

Durand 2015
Bibliography

American Bookmaker 1892
*The American Bookmaker* 14 (June 1892), p. 205.

Beraldi 1897

Bowden 1953
Bowden, Bertram V. *Faster than thought: A Symposium on digital computing machines.*

Clavairoille 2003

de Goncourt 1881

de Farcy 1890

Delaunay 1866/67

Derôme 1888

Duncan and de Bartha 1989

Eymard 1863

Gruel and Engelmann 1862

Héros et al. 2007

Hindman et al. 2001

*L’Exposition de Paris* 1890
*L’Exposition de Paris de 1889*, no. 75 (1 February 1890).

Le Livre d’Or des salons 1905

Michelant 1883

Musée Carnavalet 2002

Pagnon and Valantin 2002

Porter 2018

Uzanne 1887

Valantin 2002

Wertheim and Gessler 2006
Copyright

© Abbus Acastra / Alamy Stock Photo, p. 9; © Adam Eastland Art + Architecture / Alamy Stock Photo, p. 10; Cooper Hewitt, Smithsonian Design Museum, p. 15; © Lyon, Musées des Tissus et des Arts décoratifs – Sylvain Pretto, p. 22; © Robert & Braille, p. 17; © The British Library, p. 39; The Metropolitan Museum of Art, p. 42; The Walters Art Museum, p. 20.

Acknowledgments

I am grateful to Sandra Hindman and Laura Light for comments and suggestions on the text and entries, and to Joseph Derosier for aiding my grasp of an opaque French quote. I would also like to thank Lynley Herbert for kindly offering her time in April 2019 to lead me through her fantastic exhibition "Woven Words: Decoding the Silk Book" at the Walters Art Museum. Finally, I am grateful to the entire team at Les Enluminures.

Matthew J. Westerby is a medievalist and art historian. He contributed a catalogue of illuminations to *The Medieval World at Our Fingertips: Manuscript Illuminations from the Collection of Sandra Hindman*, written by Christopher de Hamel (Harvey Miller/Brepols, 2018). Formerly Research Specialist for Les Enluminures, he received his Ph.D. from the University of Wisconsin in 2017 and is currently Robert H. Smith Postdoctoral Research Associate for Digital Projects with CASVA at the National Gallery of Art in Washington, D.C.