



# ILLUMINATED





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## THE MATTER OF SACRED BOOKS



Beautifully constructed and decorated books that carry sacred teachings are found across religious traditions, yet their material splendor is often regarded as secondary to their textual, theological, and liturgical aspects and is usually discussed only in the context of a given tradition. Cross-cultural studies of sacred books typically consider common themes and practices of related faiths, but they have habitually overlooked the shared aspects of the books' material culture, which provide evidence of individual, institutional, and socio-economic relationships within and across cultures.

This booklet and related exhibition draw attention to shared attitudes toward creating and adorning sacred books in the traditions of Buddhism, Christianity, Hinduism, Islam, and Jainism and presents Tibetan sacred books in a broad cross-cultural context. It celebrates the luxurious materials and craftsmanship of sacred books, which continue to be valued as objects of art as well as devotion.

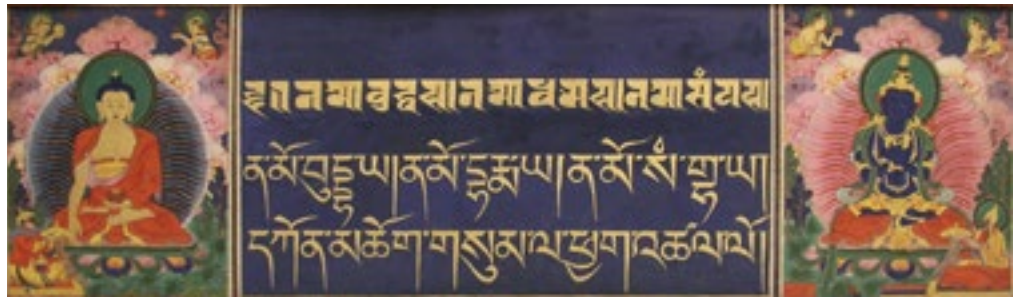
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**FIG. 1**  
Book Cover for a Volume of the Kangyur; China; 15th century; wood, gilt, and pigment; 10 5/8 x 28 3/4 x 1 1/2 in.; Collection R. R. E.

*By Elena Pakhoutova and Agnieszka Helman-Wazny*

## PEOPLE AND SACRED BOOKS

**FIG. 2**  
Wanli Kangyur Supplement (Da zang jing Ming Yongle ba nian), Volume Two (detail); China; 1606; ink and pigments on paper, silk, brocade, and wood; 27 ¼ x 9 ½ x 5 ⅝ in.; Harvard-Yenching Library of the Harvard College Library, Harvard University; TTib 1803.7 13, vol. 2



**FIG. 2A**  
Detail of Fig. 2 showing the Wanli Emperor

**FIG. 2B**  
Detail of Fig. 2 showing the Tibetan Imperial Preceptor

We expect sacred books to express the spiritual truths of their religious traditions. However, as physical objects created by people of a specific culture and time, this primary function—carrier of sacred teachings—is often eclipsed by their use as offerings, tools of persuasion and conversion, objects of religious devotion, and symbols of status. The effectiveness of sacred books in these roles is enhanced by the expense of their production. This entails not only lavish materials but also the manifold human creativity and effort required for their creation—the skills of scribes, decorators, manufacturers, printers, editors, and, perhaps most important, the support of patrons and owners. Through these various intentional investments, all of the elements of a sacred book come together to create an aesthetic quality meant to facilitate spiritual ends.

Book collections like the Tibetan Buddhist canon were exceptionally large projects sponsored by the wealthy and prominent and executed by highly skilled artists and craftsmen. Chinese emperors were patrons of the first woodblock-printed collections of the canon. The two parts of the Tibetan canon, the Translation of the Word (Kangyur) and the Translation of Treatises (Tengyur), number more than three hundred volumes, and each page required an individually carved woodblock. A book cover decorated with red lacquer and gold (FIG. 1) probably belongs to a single volume from the

first and now mostly lost printed collection, undertaken in 1410 by the Yongle emperor (r. 1402–1424). One of the supplemental volumes was printed about two hundred years later in 1606 from the same woodblocks (FIG. 2) under the sponsorship of the Wanli emperor (r. 1563–1620). The miniatures depict the emperor and the Tibetan imperial preceptor in the lower corners (FIGS. 2A, B).







**FIG. 3**  
Frontispiece from a Perfection of Wisdom (Prajnaparamita) Sutra Manuscript; western Tibet; 15th century; pigments on paper; 27 3/8 x 7 1/2 in.; Collection R. R. E.

**FIG. 4**  
Frontispiece from a Perfection of Wisdom (Prajnaparamita) Sutra Manuscript; western Tibet; late 15th century; pigments, gold, and ink on paper; 7 3/16 x 27 1/16 in.; Herbert F. Johnson Museum of Art, Cornell University; 2006.028 b



**FIG. 5**  
Gospels Book; Armenia; ca. 1675–1725; ink on paper with leather binding; 11 1/8 x 9 x 7 in.; The Morgan Library & Museum, New York; Purchased on the Herzog Fund, 2006; MA M.1149

Tibetans revere sacred books as objects of devotion, believing that the books contain the power to remove obstacles and advance spiritual and even worldly goals. This belief is especially wholehearted when a volume of the Perfection of Wisdom (Prajnaparamita) Sutra is commissioned as part of a postmortem ritual on behalf of the deceased and his/her family as the main tool for removing impediments and all that is negative (FIGS. 3, 4). This practice is not very different from one found in the Armenian Christian tradition. One Gospel book was evidently treasured and thus adorned with signet rings, earrings, necklaces, and various other valuable ornaments (FIG. 5). These served as offerings to the book itself as memorials of the faithful

devotees and their families and as a means of dispelling evil.<sup>1</sup> In both the Tibetan and Armenian traditions, the devotees' actions were directed toward the physical object, the sacred book.

<sup>1</sup> Silvie Merian, "Protection Against the Evil Eye? Votive Offerings on Armenian Manuscript" (lecture, The Graduate Center, City University of New York, New York, November 30, 2010).

## FORMATS OF SACRED BOOKS

From their beginning, written traditions have used coverings or protective mediums to help ensure the permanence of sacred texts. Scribes in antiquity used wooden cases for wax tablets, wrappers for papyrus, and wooden or bone cores to roll parchment scrolls.

### Scroll

A scroll is one of the first formats of books produced on silk or paper. The oldest preserved books on paper in scroll form are from the Dunhuang caves in western China and date to as early as the third century. Scrolls can contain text but also painting and calligraphy. In East Asia the production of high-quality thin paper was developed specifically for these purposes. Silk textiles were often attached to the ends and reinforced with wooden dowels for rolling. Scrolls were usually kept in decorated boxes or cases, as can be seen in a set of Japanese sutra scrolls attached to crystal rollers, bound with red silk, and protected by a red textile and paper case (FIG. 6).

### Codex

Codices eventually replaced scrolls and became the most common format for books in medieval Europe (FIG. 7). The codex is created from sheets folded in half and combined together. Each folded sheet is called a bifolio; each half-sheet produced by the fold is a folio, a two-sided page with a front (*recto*) and a back (*verso*). Several bifolios are set inside one another to form a “gathering.” Several gatherings are sewn together onto bands made of leather, parchment, or textile, thereby binding all of the gatherings and creating the spine of the codex. The covers of medieval books were usually made of oak or beech boards cut to size and covered in leather, parchment, or thin sheets of metal. Codices were often kept closed with metal clasps or leather strips tied together. The codex format remained the same when paper replaced parchment as the main medium for European books.

Islamic manuscripts and books were usually bound, with covers and spines comparable to Western books. Although the origins of Islamic bookbinding are still debated, their form seems to be a further development of the protective functions of the book cover and spine. The front cover was often extended into a flap that secured the book shut.

**FIG. 6**  
Japanese Sutra Scrolls with Red Carrying Case; Japan; ca. 19th century; paper, silk, ink, and crystal; scrolls: 3 ¼ x 2 ½ in. (unrolled), case: 3 ½ x 3 ¾ x 2 in.; The James and Ana Melikian Collection

**FIG. 7**  
Missal of San Petronio in Latin with Rubric of Gold Letters and Historiated Initials Depicting Pentecost and a Man Praying (detail); Bologna, Italy; ca. 1506; pigments, ink, and gold on vellum; 15 ½ x 11 x 2 in.; Spencer Collection, The New York Public Library, Astor, Lenox and Tilden Foundations; Spencer Coll. Ms. 64







### *Grantha/Pustaka*

In South Asia, Buddhist sutras were written on palm leaves beginning in the first century BCE. The consistent use of palm leaves created a specific and unified format for books, which were called *grantha* or later *pustaka*. The sutras were written on the long, narrow, rectangular leaves joined together by a string loosely threaded through the middle of the pages and two wooden covers, often decorated.

Two book covers are representative of Nepalese book formats. The longer and narrower pair of covers that depict episodes from the exaltation of Shiva (FIG. 8) must have belonged to a palm-leaf Hindu manuscript containing a related text like the Shivapurana. These covers have holes through which a single binding cord was drawn and knotted on their outer sides. The cord then ran through the palm leaves of the manuscript, allowing it to be opened, read, and then closed and tied together. The larger cover (FIG. 9), which depicts

several Hindu gods as well as the patrons of the manuscript's creation, was part of a book written on paper, as its size is typical for such works. Painting the inner face of the manuscript covers with scenes related to the content of the books was common to the bookmaking traditions of India and Nepal.

### *Pothi*

The traditional format of Indian palm-leaf manuscripts inspired the format for Tibetan religious books, called *pecha*. Their common form is generally known as *pothi*. Large Tibetan volumes exemplify the change from using palm leaves, with their long and narrow shape, to using the new medium of paper, which allowed for larger and more varied formats. A traditional Tibetan book comprises two outer covers, usually made of wood, that hold numerous unbound folios written in calligraphic script that make up the text. The title page serves as an inner cover and is always richly calligraphed and often decorated.

**FIG. 8**  
Book Covers Depicting the Exaltation of Shiva; Nepal; 12th century; pigments on wood; 2 x 23 in.; Pritzker Collection

**FIG. 9**  
Book Cover of a Manuscript; Nepal; 18th century (?); pigments on wood; 5 ½ x 20 ¾ x ¾ in.; Rubin Museum of Art; C2006.56.2; photograph by Bruce M. White



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**FIG. 10**  
Book Cover; Tibet; 16th century;  
gilt wood; 9 1/8 x 28 3/4 x 1 1/4 in.;  
Rubin Museum of Art; C2006.3.1  
(HAR 65596); photograph by Bruce  
M. White

**FIG. 11**  
Book Cover; Tibet; 14th century;  
pigments on wood; 10 3/8 x 28 3/4 x  
1 1/8 in.; Rubin Museum of Art;  
C2006.66.659 (HAR 700096)





Tibetan book covers were typically carved, painted, gilded, and sometimes decorated with metal fittings. The covers of the books in the Tibetan Buddhist canon produced in China were often lacquered and painted (FIG. 1). Tibetan and Nepalese Buddhist book covers were often deeply carved with figural reliefs and gilded (FIG. 10). Painted covers frequently displayed geometric patterns and had some shallow carving (FIG. 11). They were usually varnished, making them appear glossy although they were created with the same mineral pigments as Tibetan scroll paintings. The wood used for book covers varied depending on the region. In tropical regions shorea, sala, and sandal trees were favored; in Central Asia various fruit trees and jojoba were preferred; and in the northern parts of the Himalayas cedar, juniper, pine, and other fir trees were used. The construction of the covers also varied from a single piece of wood to a composite plate with five wooden parts wedged together without any nails.



### *Concertina*

Another book format, the concertina, represents an apparent synthesis of traditional Chinese and Indian/Southeast Asian book forms (FIG. 12). In China concertina books probably developed from the Chinese scroll format and have been almost exclusively used by Buddhists since the ninth century. This transformation, made possible by the new medium of paper, allowed an unfurled scroll to be folded in pleats, much like an accordion or concertina, creating individual pages and thus enabling the reader to flip through the text with ease. This form resembled Indian palm-leaf books and allowed for effortless navigation through the folded pages of the text. Books with such pages have no need for a string to pass through them and thus much less damage is done to the paper, increasing their longevity. In contrast to a scroll's wooden dowels, the wider and flat concertina covers provided a surface for elaborate decoration. They were often painted and lacquered or gilded and inlaid with precious stones (FIG. 13). The paper of concertina manuscripts could be thicker than that of a scroll and dyed or colored in black, on which the text could be inked in gold or silver. These manuscripts were often kept in boxes that were also richly embellished.

**FIG. 12**  
Pathama Uppajjaga Ha Peta  
Manuscript and Covers; Thailand;  
1930; gold ink on black mulberry  
paper with black lacquer and gold  
on wood; 22 3/4 x 3 3/8 x 1 1/8 in.;  
Division of Rare and Manuscript  
Collections, Cornell University  
Library; #4528 box 16

**FIG. 13**  
Decorated Box for a Buddhist  
Manuscript; Southeast Asia;  
1873–1930; ink and pigments on  
paper with pigments, inlaid stones,  
glass, and gold on wood; 15 3/8 x  
7 7/8 x 3 in.; Division of Rare and  
Manuscript Collections, Cornell  
University Library; Southeast Asia  
manuscript collection - Archives  
4528 #11

## GOLD, SILVER, AND INDIGO

Precious metals were used in adorning the sacred books of all religious traditions. Lavishly produced books were commissioned by wealthy patrons often as pious gifts to temples, monasteries, churches, and mosques and showed the patrons' reverence as much as their wealth and prominence. The processes of decorating and scribing demanded excellent artistic skills worthy of these objects.

### *Gold as Ink*

Writing in gold involved the use of powdered gold mixed with a binding material to create an ink that was usually burnished when dry. In illuminations gold ink was often used to provide highlights or articulate details. When applied against a black or blue ground, the high contrast produced a clear luminous script or decorative detail.

Although not as widely used as gold, silver was employed in similar ways, often in combination with gold, especially in Tibetan and medieval European manuscripts.

Gold calligraphy required special skill and was considered an art in its own right. Three examples show the practice of gold calligraphy in different cultures with various tools and on diverse support mediums: a Japanese sutra was written in gold ink along silver grid lines using a brush on an indigo-dyed paper scroll (FIG. 14); a page from the "Blue Qur'an" was written using a specially shaped pen on an indigo-dyed parchment folio (FIG. 15); and a Tibetan manuscript page was written using a thinly cut reed pen on an indigo-colored layered paper leaf (FIG. 16).

**FIG. 14**  
The Sutra of Innumerable Meanings (Muryōgi-kyō); 1720; Japan; gold and silver inks on indigo-dyed paper; 12 ¼ x approx. 422 in.; The James and Ana Melikian Collection; Courtesy of Phoenix Art Museum; Photograph by Ken Howie







**FIG. 15**  
Folio from "The Blue Qur'an";  
Surah 2, The Cow (al-Baqarat),  
Verses 74–81; Qairawan, Tunisia;  
mid-9th to mid-10th century; gold  
and silver on indigo-dyed parch-  
ment; 11 ¼ x 15 in.; The Rose Trust

**FIG. 16**  
Title Page from a Perfection of  
Wisdom (Prajnaparamita) Sutra  
Manuscript; western Tibet; 15th  
century; pigments and gold on  
paper; 28 x 7 7/8 in.; Collection R. R. E.

**FIG. 16A**  
Detail of Fig. 16

**FIG. 17**  
Detail of a Manuscript of the  
Kamawa-sa, the Collection of  
Ordinances from the Monastic  
Regulations (*Vinaya*); Burma; early  
20th century; wood, palm leaf,  
lacquer, and gold leaf; 20 7/8 x 4 3/4  
x 1 1/4 in.; Division of Rare and  
Manuscript Collections, Cornell  
University Library; Asia Rare #4528  
box 31



Raised gold lettering is a distinct technique used in some Tibetan manuscripts. Most often, large gold letters would be written on the title pages of the books. For these the gold was made into a thick pastelike consistency and almost sculpted onto the surface of specially prepared black-colored paper. Sometimes additional decorations such as shallow-incised floral patterns were applied to the raised surface of the letters (FIG. 16A).

A comparable but reversed aesthetic and decorating technique is found in Burmese manuscripts (FIG. 18). Here the support is gold leaf and the letters are black, executed in thick lacquer and forming the so-called tamarind seed, or *magyi-zi*, script that remains slightly raised above the gold surface (FIG. 17).





**FIG. 18**  
Title Page of a Perfection of Wisdom (Prajnaparamita) Sutra Manuscript (detail); Tibet; 14th century; pigments and gold on paper with silk and leather; 7 ¼ x 28 x ½ in.; Rubin Museum of Art; C2003.38.1

**FIG. 19**  
Qur'an (detail); Morocco; 19th century; ink, pigments, and gold on paper; 8 ¾ x 5 ½ x 1 ¾ in.; Division of Rare and Manuscript Collections, Cornell University Library; Cornell Kroch Library Rare & Manuscripts, Archives 4600 Bd. Ms. 585

**FIG. 20**  
Book of Hours, Use of Rome: The Last Supper; Avignon, France; 1390–1400; ink, pigments, and gold on parchment; 4 13/16 x 3 11/16 x 1 ¼ in.; Spencer Collection, The New York Public Library, Astor, Lenox and Tilden Foundations; Spencer Coll. 049 (Vol. 2), f. 1b verso

### *Gold as Pigment and Decorating Material*

Using gold as a pigment in illuminations and illustrations is a practice found in many artistic traditions. However, Buddhist, Jain, and Hindu traditions employ gold as both pigment and ink; one Tibetan title page was written in gold and silver *u chen* script and demonstrates the fine use of gold pigment in its miniatures (FIG. 18).

The use of gold leaf and tooled gold found exceptional expressions in Islamic and medieval Christian manuscripts (FIGS. 19, 20). One Qur'an frontispiece (FIG. 19) has a gold-leaf ground and indigo border of geometrical and floral designs that symmetrically frame the calligraphic text in Arabic inked in black with verse endings marked by small gold rosettes. With the lavish patronage of book production in Iran and Turkey from the sixteenth through the nineteenth century, such ornamental designs of intertwined flowing lines, originally found in Arabic decorations (arabesques), combined with bright colors and gold, were used extensively for decorating the opening spreads of Qur'ans.



## Indigo

Even though the perception of color is relative to culture, time, and personal preference, many cultures achieved similar aesthetic effects employing different methods. Indigo, valued for its rich blue color and luster, was a treasured material that embellished sacred books of many traditions. An organically derived pigment distinguished from the earthy palette of yellow, brown, green, and red produced by mineral pigments, it was a rare commodity and as expensive as gold. Prior to its wider use as a blue dye, indigo was used as a pigment in inks and for painting. Greeks and Romans used it in the century before and during the first centuries of the Common Era for painting as well as for medicinal purposes.<sup>2</sup> Originating in India, indigo may have reached Europe by way of Egypt. In the medieval Arab world, scribes and manuscript painters used indigo in paints and inks to embellish their texts and to enliven the blacks. When used for blue in Islamic manuscripts, indigo was usually mixed with orpiment, a clear yellow pigment from the toxic mineral arsenic sulfide, for blue-greens and sea-greens.

The page of the “Blue Qur’an” (FIG. 15) represents one of the earliest extant examples of a manuscript written in gold on indigo-dyed parchment, a rare and especially expensive production. The Qur’an has a fixed text, which makes it possible to extrapolate the number of folios in a whole manuscript based on the number of lines per page. The famous “Blue Qur’an” has 15 lines per page and thus had about 650 folios; although now dispersed, they were originally bound in 7 large volumes. Considering that a single bifolio required parchment made from a whole animal skin, the cost of the entire manuscript’s production is truly impressive.

Indigo could also produce a purple shade, the color of status associated with emperors. The use of blue and purple parchment for writing in gold and silver is usually attributed to the early Christian codices produced in Byzantium in the fifth to sixth century, but indigo was rarely used for dyeing parchment in medieval Europe. The intricately intertwined Latin initials of a Gospel lectionary are written in different shades of gold, purple, and green and fill the entire page. Their purple and blue pigments were probably derived from plants and berries (FIG. 21) and provide a similar effect of contrast against the gold and silver of the entwined letters.

**FIG. 21**  
Elaborate Text Page from a Gospel Lectionary: *Sequentia Sancti*; Benedictine Abbey of Corvey, Saxony; Reichenau or Westphalia; ca. 950; pigments and gold on purple vellum; 5 ¼ x 7 ¾ x 3 in.; Manuscripts and Archives Division, The New York Public Library, Astor, Lenox and Tilden Foundations; MA 1



<sup>2</sup> Jenny Balfour-Paul, *Indigo in the Arab World* (London: Curzon Press, 1997), 10–11.



## TEXT AND IMAGE

FIG. 22

Mongolian Manuscript of the Self-liberated Awareness of the Peaceful and Wrathful Deities (Zhi Khro Dgongs Pa Rang Grol) (detail); Mongolia; 19th century; pigments and ink on paper; 1 ½ x 24 ¼ x 7 ¾ in.; Rubin Museum of Art; C2004.37.3 (HAR 65385)

FIG. 23

Gospels Book in Arabic (Al-Injil al-Sharif) (detail); Turkey; 18th century; ink, pigment, and gold on paper; The James and Ana Melikian Collection

FIG. 24

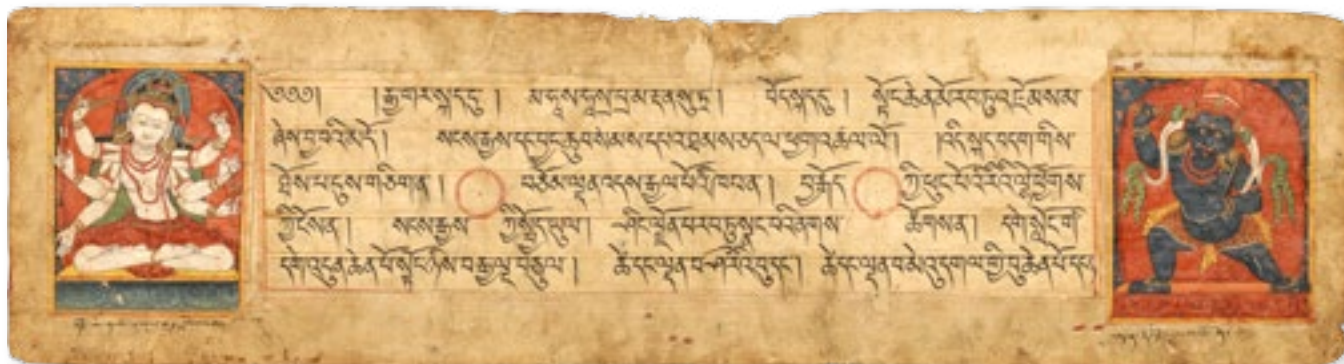
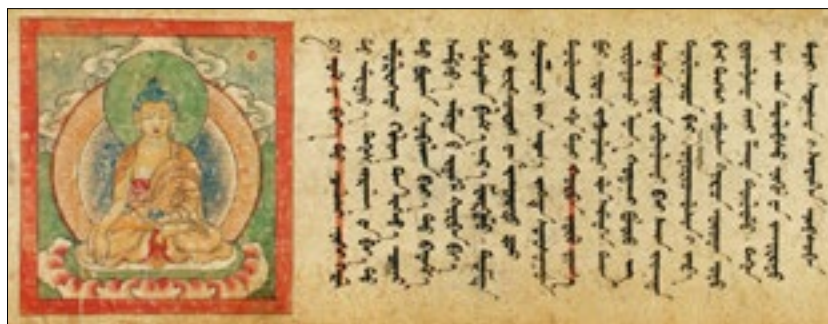
Frontispiece from a Great Destroyer of the Thousand Foes (Mahasahasrapramardani) Sutra Manuscript; Tibet; ca. 13th–14th century; ink and pigments on paper; 17 ¼ x 36 ¾ x 2 ¼ in.; Rubin Museum of Art; C2004.33.1; photograph by Bruce M. White

Although the primary purpose of sacred books is to convey sacred texts, their messages are almost always attended by images and aesthetically enhanced by ornamentation. The decoration of sacred texts and the relationships between text and image reveal much about the culture in which they are produced and used. Some essential choices of text and image treatment within a sacred book are quite comparable in many traditions and testify to the overarching culture of the book.

### Text

Scripts and the arrangement of texts vary and depend on the language of the book. Decorations painted in gold and other precious pigments, from simple frames to richly decorated borders and rubrics, are common in all traditions. A red rubric

can be seen in a Mongolian manuscript (FIG. 22). A Gospels book in Arabic features a passage in red that serves a similar purpose (FIG. 23); although this is a Christian manuscript, it reflects the Islamic culture of sacred books, including the absence of figural scenes. The superb quality of the materials—paper, ink, gold leaf, and pigments—is matched by the scribal technique. In Tibetan and Mongolian manuscripts, the images are usually figural representations of deities, the subjects of the books (FIGS. 22, 24), and often illustrate the text or relate to it in some less direct way.







## Image

The various types of decoration can generally be grouped into: miniatures, or small pictures incorporated into the text, sometimes occupying a whole page or part of its border; initial letters containing either painted miniature scenes, also known as historiated initials, or elaborate ornamental decoration; and borders, which may consist of miniatures but more often are composed of decorative motifs or simple sketched frames. Very often image and text carry equal weight, which is especially evident in books with exquisite calligraphy, symbolic ornaments, and miniature paintings. Frequently the miniatures illustrate the text, and sometimes they form pictorial narratives that almost replace the text altogether.

Different approaches toward decoration, illustration, and text can be seen in three examples. Both a Book of Hours page and a Razmnama page contain painted borders that frame the text off-center (FIGS. 25, 26). However, the page from the Book of Hours

frames the text within a highly decorative border that embellishes the page with colorful images painted using a *trompe l'oeil* technique (FIG. 25). Several historiated initials decorating the text contrast the colors in the border while the usual red indicating sections, chapters, and so forth sets them apart from the black-lettered portions of the text. In the Razmnama page the painting illustrates the written portion of the text instead of serving a simply decorative purpose (FIG. 26). The painted scene, despite its abbreviated form, evokes the complete contents of the text written on this page, achieving equal importance. A Ramayana page (FIG. 27) delivers its narrative pictorially, as the corresponding text would have been on a separate page or the reverse. Here the illustration, with its large-scale, dynamic action, claims priority over the text.

**FIG. 25**  
Illuminated Page from a Book of Hours Manuscript with a Naturalistic Border of Birds, Insects, and Flowers; attributed to Ghent-Bruges school of illuminators; Flanders; 1500–1510; tempera and gold on vellum; 8 ¼ x 5 ½ in.; Acquired through the Membership Purchase Fund; 77.089.002

**FIG. 26**  
Page from a Book of Wars (Razmnama, Persian translation of the Mahabharata) Manuscript: Krishna Meets with King Yudhishthira, Garuda Arrives to Transport Krishna and His Companions, and the Ladies Kunti and Subhadra; painting attributed to Fazl; India; 17th century; pigments and gold on paper; 15 x 9 in.; George and Mary Rockwell Collection; 2004.059

**FIG. 27**  
Page from a Ramayana Manuscript: Rama's Army Attacks Ravana's Demon Army; India; 1595; pigments and gold on paper; 11 ¼ x 7 ½ in.; George and Mary Rockwell Collection; 90.011

**FIGS. 25–27** Loans and photography courtesy of the Herbert F. Johnson Museum of Art, Cornell University



In a manuscript of the Sangrahani Sutra, the images and the text have an equally instructive value (FIG. 28). The page illustrates Jain cosmological theories of the universe, its creation, and the place of human beings within it. The images are not mere decorations or adornments of the manuscript. Instead they are integral to the text and have a truly instructive character. The palette of the miniature paintings is limited to red with some yellow, green, and black, and the text is written in a Prakrit language in black ink.



A Gospels book highlights the reverence of sacred books in the Armenian tradition (FIG. 29). Following Armenian conventions, the text seems to be enshrined within an architectural structure formed by two winged columns and a large gable roof, surrounded by fanciful trees and tall flowers. The traditional colors of red, indigo, green, and gold complete the pictorial convention of these illuminations.

**FIG. 28**  
Page from a Sangrahani Sutra Manuscript; Gujarat or Rajasthan, India; ca. 16th century; ink and pigment on paper; 4 3/4 x 8 1/8 in.; Rubin Museum of Art; F1997.31.30

**FIG. 29**  
Gospels Book in Armenian (detail); written by the scribe Pilippos; Armenia; 1595–1601; ink, pigments, and gold on vellum; 5 1/2 x 3 1/2 x 2 in.; The James and Ana Melikian Collection



## WOODBLOCK PRINTING CULTURE

The invention of printing can be directly connected to Buddhism and the need to reproduce religious texts and simple images of the Buddha. This demand greatly influenced the development of printing technology. Text reproduction began with stamping and rubbing, which led directly to block printing. The Chinese were the first to use this process to print texts, doing so some time prior to the seventh century. The earliest well-defined extant block print was made in Japan in 770. The earliest extant printed book, dated 868 and now in the collection of the British Library, was found in Dunhuang, China.

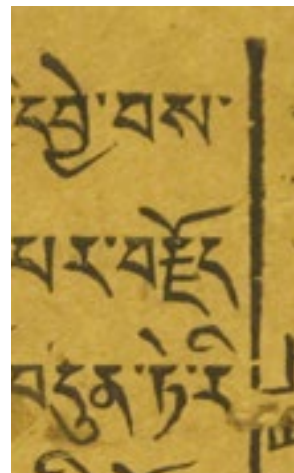
### Woodcuts

Tibetans adopted the block printing technology as early as the twelfth century and continued to carve woodblocks for printing into the twentieth century. The earliest known Tibetan printed document, a small prayer, was created in Khara Khoto in 1153.<sup>3</sup> A volume of the Kalachakra Tantra (Tantraraja Shrikalachakratra or Laghukalacakratra; *dus 'khor rgyud*) was printed from woodblocks carved for the funeral ceremonies of Kublai Khan (1215–1294) and testifies to the early practice of Tibetan woodblock printing (FIG. 30). The Tibetan master Pakpa Lödrö Gyeltsen (1235–1280) was instrumental in the dissemination of printing technology in Tibet. His projects were sponsored by Mongolian leaders, and Tibetan and Chinese craftsmen worked on them together under the guidance of the Tibetan religious hierarchy.<sup>4</sup> Tibetan Buddhist books printed from woodblocks are usually in a *pothi* format, and the text is printed on relatively soft paper in comparison to that used for manuscripts, which has a highly processed surface. Tibetan and Mongolian books share similar printing

techniques and layouts despite the fact that the lines of text in Tibetan run horizontally while the Mongolian text is vertical. Books in both languages are read from left to right.

The project of printing Tibetan canonical works usually took years and involved numerous specialists, including proofreaders, woodblock carvers, paper manufacturers, carpenters, painters, blacksmiths, managers, secretaries, and many apprentices. In Tibetan books produced from woodblock printing, also called xylographs, both text and illustrations were printed from the same carved block and the illustrations were sometimes subsequently painted or colored. Often hundreds of copies were printed from a single set of woodblocks. Depending on regional and craftsmen's preferences, the chisels and types of wood used for the printing blocks varied, but blocks were most often carved from the wood of pear and jojoba trees.

While the proofreader finalized the text written in ink on very thin Tibetan paper, the carvers sized and polished wood planks for the blocks. When a block was ready for the text to be transferred, the paper was attached with wheat-flour paste to the wooden surface with the text facing the block. Then the paper sheet was rubbed off and the text appeared in reverse on the surface of the wood. When the block dried, the text was oiled with mustard oil, or *pe-k'an-snum*, to clarify the letters. The block was then carved following the shapes of the letters (FIG. 31). For each page, an individual block needed to be carved. When all the blocks for one literary work were finished, the names of carvers were sometimes listed at the end, together with the place of production and the name of the benefactor who paid for the work.<sup>5</sup>



**FIG. 30**  
Volume of the Kalachakra Tantra (Tantraraja Shrikalachakratra or Laghukalacakratra; *dus 'khor rgyud*) (detail); printed from woodblocks carved for the funeral ceremonies of the Kublai Khan (1215–1294) sponsored by his wife and son; China/Mongolia; date unknown; ink on paper; 2½ x 19½ x 4½ in.; Collection of Gene Smith, Tibetan Buddhist Resource Center; W4CZ75

**FIG. 31**  
Tibetan Woodcut Block of a Page of The White Beril (*bai DÜrya dkar po*) (detail); written by Sangye Gyatso (1653–1705); Tibet; 18th century (?); wood with traces of ink; 1 x 24½ x 3½ in.; Collection of Gene Smith, Tibetan Buddhist Resource Center

<sup>3</sup> Kurtis R. Shaeffer, *The Culture of the Book in Tibet* (New York: Columbia University Press, 2009), 9.

<sup>4</sup> *Ibid.*, 9–10.

<sup>5</sup> Corneille Jest, "A Technical Note on the Tibetan Method of Block-Carving," *Man*, no. 61 (1961): 83–85.



It is generally agreed that woodblock printing developed in Asia several centuries prior to its European use. In Europe the printing of images on cloth advanced into the printing of images on paper using woodcuts in the beginning of the fifteenth century. Woodcut printing in Europe was usually used exclusively for illustrations rather than for printing entire books. The use of the same process to print texts of substantial

length with images in xylographic books in Europe occurred only after the development of movable type printing in the 1450s. A Book of Hours featuring the “Dance of the Dead” is a beautiful example of a manuscript on vellum in which handwritten text is framed in a border printed from several woodblocks and repeated on different pages (FIG. 32).

### *Movable Type*

Ceramic and wooden movable type was probably in use in China beginning in the tenth century. Koreans produced the first metal movable type sets in the 1370s. As seen in a set of wooden movable type (FIG. 33), the characters engraved into a block and cut into single fonts were finished off with a small knife to ensure a uniform size. They were then fixed in a wooden frame. The surface of this settled text would then be inked and rubbed onto paper in a process similar to that of traditional woodblock printing.

**FIG. 32**

Book of Hours, Use of Rouen (detail); Paris; 1503; ink and pigments on paper; 4¼ x 6¾ x 1¼ in.; Division of Rare and Manuscript Collections, Cornell University Library; Rare Books BX2080.A5 F8 1503

**FIG. 33**

Printer's Set of Moveable Type (detail); China; ca. 1880; wood with traces of ink; 10¼ x 6¾ x 1½ in.; Division of Rare and Manuscript Collections, Cornell University Library; Cornell University Kroch Library Rare & Manuscripts, Archives, 6469



## MATERIALS

Although the materials used in the production of sacred books were determined primarily by their cultural context and regional origins, they were all carefully selected for their high quality. Individual craftsmanship as well as patronage also contributed to the choices of the materials to be used. In the context of Buddhist traditions, the objective was usually to gain great merit, which was contingent on the high quality and preciousness of the materials.

Some of the oldest known material supports for writing include turtle shells, believed to have been used in China as early as 6000 BCE; clay tablets, wood, and papyrus used in the Mediterranean in about 3000 BCE; and oracle bones, stone tablets, birch bark, bamboo, and palm leaves used in South Asia beginning in about 1500 BCE. These materials were followed by leather, parchment, vellum, wax tablets, and, most recently, paper.

### *Palm Leaf*

Palm leaf was one of the primary mediums for writing in South and Southeast Asia, but the leaves were very fragile and easily destroyed by dampness and insects. The survival of ancient texts was assisted by the continuous copying of old texts, a meritorious act for both a scribe and a sponsor, and Buddhist monasteries were the production centers of books on palm leaves. With the advent of paper, most of Buddhist literature began to be written on this new medium, and palm leaf books became rather exceptional. Both mediums have their advantages, but it is generally easier to write on paper.

### *Parchment*

Beginning in the second century BCE scrolls and single leaves were written on parchment or vellum, a material first known in Asia Minor and named after the city of Pergamum. The manufacturing process of this material made from animal skin



**FIG. 34**  
Leaf from a Qur'an in Kufic Script; Near East, 9th or 10th century; ink, pigment, and gold on vellum; 9 x 11 1/2 in.; Herbert F. Johnson Museum of Art, Cornell University; George and Mary Rockwell Collection; 2000.029.001; photography courtesy of the Herbert F. Johnson Museum of Art, Cornell University

is fairly complex: the whole skin has to be treated with lime; de-haired and de-fleshed; stretched; scraped on both sides and treated with hot water; scraped again and rubbed with pumice, sometimes with an application of chalk; and then dried. Vellum is often a reference to high quality calfskin, while all other skins are called parchment. The highest quality uterine vellum was made from the skins of aborted calves. The wide availability of animal skin constituted a significant advantage for the use of parchment since its production did not depend on imported supplies, unlike that of papyrus or palm leaves, which were manufactured only in areas where the plants grew.

Parchment became a favored book material, except for those traditions in which religious or ethical beliefs precluded the killing of animals. This is why no Buddhist books were made of this medium. Parchment and vellum were used in the production of early Qur'ans, as seen in two examples from the ninth or tenth century (FIGS. 15, 34). The durability of parchment was suitable when book production grew to a larger scale, such as in the scriptoria of Christian



monasteries. In Europe parchment remained the common material for sacred books until the late Middle Ages when it was eventually supplanted by paper.

### *Paper*

Historical records commonly date the invention of paper to the year 105, when an official of the Chinese imperial court reported the invention of papermaking to the Eastern Han emperor. Archaeological records suggest, however, that paper had already been used in China as early as the second century BCE. The art of papermaking then reached Korea, where paper production began sometime between the fourth and sixth centuries. According to historical accounts, in the early seventh century, sixty years after Buddhism was introduced to Japan, a Korean monk brought papermaking to Japan and shared his knowledge at the imperial palace. The art may have reached Tibet about 650 and then spread to India.<sup>6</sup> Via the Silk Road, Arabs learned the craft from the Chinese and in 793 built the region's first paper mill in Baghdad. Through a gradual transmission along numerous trade routes, the papermaking craft spread west into Europe and eventually around the world. Paper arrived in northern Africa about 1100 and by 1150 could be found in Spain. The establishment of the first paper mill in Europe took place in 1453 and in North America (Philadelphia, PA) in 1690.

In any given culture, the process of papermaking strongly shaped its aesthetics: the choice of raw fibers, the properties of these fibers, the degree of fiber blending, the type of papermaking mold, and the preparation of the paper surface for writing or printing. For example, the distinctive characteristics of Chinese and Japanese calligraphy are directly linked to how the paper absorbs ink,

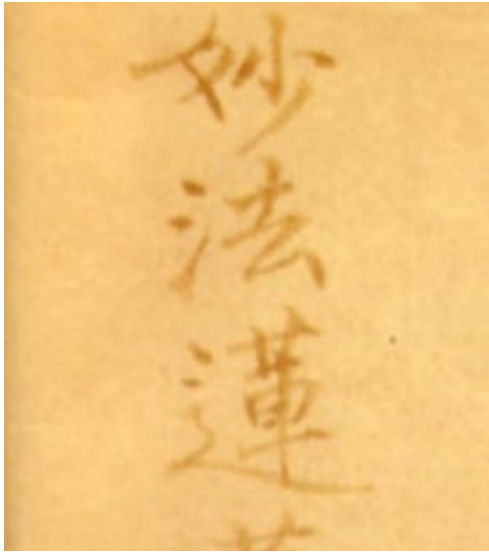
and the characteristics of traditional Tibetan paper no doubt contributed to Tibetan lettering style.

In contrast to the Chinese and Japanese traditions that used the brush, ancient Tibetan calligraphy in sacred books was created with a bamboo pen. The letters resemble those in medieval European manuscripts on parchment rather than Chinese or Japanese characters. Compared to the thin, silky Japanese *gampi* and *mitsumata* paper made with fibers from the *Thymelaeaceae* family, Tibetan paper made with *Daphne* and *Edgeworthia* fibers from the same botanical family was traditionally rather thick, with an uneven, slightly glossy surface. Unlike the Japanese process, Tibetan paper production did not use plant-derived glue and extensive pounding of pulp when the prepared fibers were mixed with water and sifted, resulting in uneven fiber distribution. To obtain a smooth surface, Tibetans glued a few layers of paper together and finished the surface with wheat or barley powder (*tsam pa*). The paper was then polished, making its surface smooth and virtually nonabsorbent, which limited ink penetration.

### *Ink and Other Writing Materials*

Ink remains one of the primary elements in book production. Various recipes for its preparation include soot or burnt resinous wood, color pigments, or metal as the ink's main component with a possible mixture of gum, honey, borax, or, for a special occasion, other unusual and extravagant materials. Blood is an example of such a material, but it is extremely susceptible to fading, as can be seen in a Chinese sutra (FIG. 35). In the Tibetan Buddhist tradition adding blood to ink was practiced as well, but it had a dual symbolic significance. It expressed the donor's devotion and assured the effective

<sup>6</sup> India is one of the most difficult areas to reconstruct the history of paper, as scholars' disagreements on the date of the beginning of paper production range more than a thousand years.



qualities of the sacred book if the blood was from a highly revered master.

Precious metals such as gold and silver were used not only as inks and pigments but also as main mediums, as a rare silver scroll demonstrates (FIG. 36). This scroll was probably part of the consecration materials inserted into a statue of the Buddha.

In Tibet one method for saving paper and ink was using a small wooden plank or tablet with a hollowed out black-inked writing surface instead of paper (FIG. 37). Tibetans



learned script and calligraphy by writing on such tablets, known either by the name *samta* or the honorific *bka'sam*. The black surface of the tablet was thinly oiled and covered with ash before writing so that the ash would adhere to the oil when the user wrote on it with a wooden pen. These writing tablets were sometimes kept in beautifully decorated cases. This is an impermanent kind of notebook as the writing on it is easily effaced from the surface—it is like writing in sand—yet sometimes whole volumes were written on *samta* prior to being transferred onto paper.

**FIG. 35**  
The Lotus Sutra, Chapter on Bodhisattva Avalokiteshvara (detail); China; 1931; human blood on paper; 11 x 3 3/4 in.; The James and Ana Melikian Collection

**FIG. 36**  
Buddhist Scroll; Burma; 17th century; silver; 17 x 1 1/2 x 2 in.; The James and Ana Melikian Collection

**FIG. 37**  
Writing Board (*Samta*); Tibet; date unknown; pigments on wood with lacquer and felt; 1 3/8 x 14 3/4 x 2 3/8 in.; Collection of Gene Smith, Tibetan Buddhist Resource Center

## CONCLUSION

Despite their different forms and particular cultural and technological contexts, sacred books reflect the shared attitudes of people who were involved in their creation, appreciated their content as well as art and craftsmanship, and preserved them for future generations. These artisans, scribes, editors, patrons, practitioners, and owners may have had different belief systems and lived during various times and in different parts of the world, but they shaped and maintained the culture of the book. It is hoped that this exhibition's cross-cultural exploration contributes to our shared twenty-first-century experiences and inspires a similar passion for the art and culture of sacred books.



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**COVER** Top: Figure 4 Frontispiece from a Perfection of Wisdom (Prajnaparmita) Sutra  
Bottom: Figure 15 Folio from "The Blue Qur'an"

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