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Material Supports

1a. Parchment/Vellum

Parchment was a writing support produced from the skins of various animals. Recipes varied, but skin was usually washed, soaked in lime, washed again, dried under tension and then dehaired. Although the two terms are often interchangeable, vellum was a slightly higher quality material made from calf-skin (the best quality came from uterine, i.e. unborn, calves). Parchment has a smoother flesh side and a rougher hair side, with the flesh side being the preferred writing surface.

The attributes of parchment differ depending on the animal used. ‘Quality’ denotes the thickness of the parchment, ‘drape’ is its colour and appearance. High quality parchment is even with a good, plain drape. Among the advantages of parchment over paper was that it was a better support for illumination. It was also more durable and could be reused if required. If the writing was no longer needed, the parchment could be scraped or washed clean and the surface reused. This recycled sheet was then called a palimpsest. The old writing often remains as a dim impression on the skin and can often be read. Parchment was however expensive and a large codex could require as many as two hundred skins.

1b. Paper

Paper making originates in the far-east and papermaking diffused through the Muslim World to Western Europe by the 11th Century. Medieval paper was produced using linen rags. The rags were cleaned by soaking and then pounded, either by hand or using trip-hammers powered by a waterwheel, the pulp was drawn out on a square mesh frame. This was then squeezed between two sheets of felt and the water squeezed out. The individual sheets were then allowed to dry. Paper was produced in bundles called reams, usually of 20 ‘quires’ or 480 sheets of paper. Different paper manufacturers would mark their sheets with a watermark (produced using a wire image on the frame used to make the paper). Paper was, generally, cheaper than parchment, and it was easier to ensure that the colour and surface were consistent both on each individual sheet and between sheets. It also had the advantage, once printing had been developed, that it could be moistened to receive an impression.
1c. Wood

Smooth surfaces of wood were frequently used as writing surfaces in art and in accounting (for example in tallysticks). Hinged diptychs of wood with a layer of wax were occasionally used for note-taking. In the making of manuscripts, wooden boards are much more commonly used as a binding material.

1d. Leather

Although parchment is arguably a kind of leather, it is untanned. The use of tanned leather as a writing surface was more common in the ancient world than it was in the middle ages (there are leather fragments among the Dead Sea Scrolls for example). However, such was the durability of leather and the cost of writing materials that ancient leather manuscripts were sometimes scraped clean and written on a second time.

Leather is much more frequently found in the bindings of medieval manuscripts than as a writing support.

1e. Hemp

Hemp or vegetable-based paper was not common in the middle ages and canvas produced from hemp fibres was rarely used as a manuscript support. In the fifteenth century, stretched canvases began to be used as supports for painting (instead of wooden panels) and therefore for the writing that appeared in them.

1f. Metal

Metal was not suitable as a support for writing with pen and ink. However, there are engraved inscriptions on metal items, most frequently on religious objects such as reliquaries and liturgical vessels. At the end of the middle ages, improvements in metal-casting techniques enabled letters to be clearly and reliably cast in metal, which was the basis of printing.

1g. Silk

The high cost of silk meant that it was very rare for it to be used as a support for handwriting in the Latin west. Silk used as a support for writing was more common in Asia. Yet silk objects, particularly vestments worn by the clergy, often had writing embroidered onto them.
2. Book Production

2a. Preparing the Quires

A quire, sometimes referred to as a gathering, was a group of pairs of folded leaves (with each leaf equivalent to two sides of a page). A single skin or sheet, folded once, gives two leaves and four sides and is a *bifolium*. Two sheets, folded once, gives four leaves and eight sides and together are referred to as a *binion*. Four sheets (eight leaves and sixteen sides) is a *quaternion*. These quires would ultimately be the units in which the manuscript would be sewn together when completed. Quires could be split up and worked on by several craftsmen at once. They were usually only brought together in a codex once all the work was done and the book was being bound. Typically the quires were arranged so that flesh-side faced flesh-side and hair-side faced hair-side (sometimes referred to as 'Gregory’s Rule©').

The number of folds could be multiplied and the number of leaves a single sheet could yield increased with the size of the book being reduced each time. In printed texts the format of a book is often given as the number of folds (*folio* is one, *quarto* is two, *octavo* is four and so on and so forth. This terminology is not normally used for manuscripts).

2b. Layout

Scribes had to decide, at the outset, how they were going to present their text. This entailed deciding where the text was going to go and where, if they were included, illustrations should go and what they should be. They also had to consider paratextual apparatus by which the text could be navigated. These included chapter numbers and titles, running headings, rubrics, *paraphs, litterae notabliores* or capitals, annotations, commentary and numbering of columns or pages.

Such features became much more common from the twelfth century onwards as reference works were produced for scholarly contexts. Many texts were copied with standardized sets of paratextual apparatus. Others were augmented individually with additions by readers and annotators in the later stages of their manufacture.
2c. Lines

The first task in designing a manuscript was to rule in the lines vertically and horizontally. The spacing and the size of the margins depended entirely on the kind of manuscript being produced. Generous margins allowed space for marginal illustration and annotation (both by annotators who were part of the production process and by readers). Because of cutting by successive generations of bookbinders, the margins that we see on surviving manuscripts are often much smaller than those which the original designers of the manuscript intended.

Basic ruling was a box defining the written space and the margin and parallel horizontal lines on which the scribe would write. Depending on the layout, this might become more elaborate. If, for example, multiple columns were to be written, then this would involve a more elaborate ruling of the page.

There were a number of methods by which the designer could make sure that the writing space was identical on every page of the manuscript. He could go to the end of each ruled line and use a tool called an awl to poke a hole through one page onto the next. All he would then need to do is join up the lines and he would have a consistent writing space. Otherwise, the lines might be scored with the back of a knife, creating an impression that could be followed on the next page.

Lines also played a role in the process of producing illuminations as contracts will occasionally specify the height of an illumination in terms of its height in lines.
2d. Binding

Book-binding could be more - or less - luxurious depending on the manuscript. Normally a binding consisted of a number of leather or cord bands to which the quires of the manuscript were sewn and which were attached to the two boards that made up the cover. Often, if you look at the spines of medieval texts you will be able to see the bands as raised ridges on the book’s spine. Most manuscripts also have flyleaves (blank or rough leaves at the beginning and end of a manuscript offering added protection to main text).

The covers of a book were usually a wooden boards covered in some sort of leather or textile. Where weight or cost was an issue, books might also have a cover of stiff hog-skin or else they might have a flexible cover of cloth or leather (in such cases the book is said to be ‘limp bound’). Wooden book covers might then be covered in any number of materials, including but not limited to parchment, leather, paper, canvas, ivory, whalebone, and metal. Leather was perhaps the most commonplace covering and was frequently embellished with decorations. This was often done by blind-tooling, stamping or punching. The book could then be further augmented with metal edging, clasps and, if it was to be fixed in position, with a chain.

Many, perhaps even most, medieval manuscripts have been rebound several times since they were first created. This has several consequences. The first is that many of them have (as mentioned) been cut to new sizes in order to fit the new bindings. The second is that it cannot be assumed that texts compiled in miscellanies (that is collections of several texts in one codex) represent the intentions of a medieval book-producer. Subsequent collectors and archivists have split up medieval books and created new ones in the process of rebinding their manuscripts.
3 Writing

3a. Scribe

Though the image of the solitary monk in the seclusion of the monastery’s Scriptorium is true for the early middle ages, by the twelfth century the business of producing manuscripts was commercialised and the vast majority were produced by professional, usually secular, scribes capable of writing several different scripts or hands, depending on the requirements of the particular manuscript. There could be several different scribes working on one manuscript. Earlier inks were often carbon based, i.e. they used soot or ash to get the black colour. The brown-black ink that medieval scribes used was usually ‘iron gall ink’ made from tannins derived from the fermentation of ‘oak galls (these are abnormal swellings on oak trees caused by the activities of parasitic wasps). The ‘pens’ were nearly always quills (large flight feathers) from large birds like geese or swans. Reed pens are known to have been used but quills yielded a much finer point and much better lettering.

3b. Rubricator

The term ‘rubrication’ comes from the Latin rubrum, meaning ‘red’. Using of Red ink for Headings and picking out of important words and details goes back to Antiquity. The function of Red text was often paratextual, that is to say that it served to present the main text to a reader and comment on its meaning. In a Book of Hours, for example, a rubric might instruct the reader as to how they should say a prayer to receive an indulgence (a reduction in their time in Purgatory). In a calendar (such as those that usually preface a book of hours) the days of important festivals might be written in red, and be therefore known as a ‘red letter day’ (those of minor saints would be in Black and major feast days like those of Holy Week might be picked out in even more costly materials such as gold or blue ink).
3c. Illuminator

The Illuminator’s task began after that of the scribe. If a manuscript was to include illumination, then its layout would be designed with spaces for pictures. The scribe would then leave these spaces blank for the illuminator to fill in and occasionally leave written instructions for him to follow in the form of notations. (see the example of Klosterneuburg, CCI 308, fol. 261v where a space was left for the illuminator but the scribe/illuminator finished his initial). As book production became increasingly commercial from the twelfth century onwards, the processes of copying and illumination became distinct activities carried out by different professionals. Illuminations could take the form of miniatures that fill part or all of the page, marginalia, initials (which could also be historiated, i.e. the illustration depicts what is in the text) and more.

The designs were first copied, often working from an ‘exemplar’ or model. These would subsequently be coloured. The pigments might be mineral or organic and would be ground and mixed with some sort of binding agent, which might be one of a number of gums but egg was the most widely used. Recipes might also contain varying quantities of other materials such as vinegar, wine, honey or myrrh. The colours used would depend on availability and cost. *Lapis Lazuli*, for example, was used to make ultramarine blue and was much more expensive than gold, coming all the way from Afghanistan. *Azurite*, by contrast, was a less expensive blue, with sources throughout southern and eastern Europe, but it yielded a duller colour.
If a manuscript’s illuminations were to be decorated with gold or silver, then there were two ways of applying it. The first was as leaf, which was always applied first. The space to be decorated was painted with glue or gum and the leaf laid flat over the top. The gold would stick to the spaces with the adhesive and the leaf could be brushed away from the rest of the page. In later manuscripts gesso (a mixture of glue and white pigment) would be used. This produced a slightly raised surface onto which gold leaf could be transferred and then burnished to a brilliant shine. The other method of applying gold was as powder suspended in egg or some other binding agent. This would be painted on at the end of the illumination process.

3d. Corrector

Though manuscripts can never be said to have been ‘completed’ since they were subject to constant alterations and adaptations after they left the workshop, the initial stages of the manuscript’s production were completed by the corrector or reader-emendator. Their role was to ensure that the grammar and syntax were correct and occasionally to add interpretative apparatus. Corrections were usually inserted into the margins, though superscript lettering was also used occasionally.
Part 4: Organization of Scripts

4a. Autographs

Autograph manuscripts are manuscripts written by the composer of the text. These are often important because they are the working copies used by the author in composing their text and bear the signs of their revisions and thought processes. It is not altogether safe to conclude that a manuscript is an autograph copy based on a colophon (a note made by the scribe about the manuscript's production). Colophons claiming that a particular manuscript was the product of the author's own hand could be and were copied by workshop scribes. Sometimes it is a fair copy that survives and in such cases it can be very hard to determine whether or not it is an autograph manuscript.

4b. Copies

The vast majority of manuscripts were copies produced by scribes working either alone or in tandem with others from an exemplar. Since the basic working unit of a manuscript was the quire, copying was often carried out by several scribes working on different quires. The structure of the book trade tended to encourage this kind of system, since scribes tended to congregate in metropolitan centers where their skills were in greatest demand. Less commercial kinds of manuscript copying continued to be important throughout the Middle Ages. Manuscripts produced for personal use survive from this period. From the thirteenth century onwards, it was standard practice in medieval universities for the books on which the masters lectured to be kept by stationers licensed by the university as unbound quires. Students could borrow a text one quire at a time and exchange it for the next one when they had finished the last. The result was that several students could copy out the same text at once. These multiple exemplars were called peciae (singular pecia, meaning quite simply 'pieces').

4c. Administration

Among the most numerous manuscripts from the Middle Ages are those that deal with administrative affairs. Legal and administrative records were produced at all levels in both secular and ecclesiastical government. These manuscripts are often much plainer than other and employ less elaborate chancery or documentary hands.